

INNOVATIVE FINANCING TECHNIQUES:

A Catalog and Annotated Bibliography



U.S. DEPARTMENT OF TRANSPORTATION
Urban Mass Transportation Administration
Office of the Secretary



INNOVATIVE FINANCING TECHNIQUES

A Catalog and Annotated Bibliography



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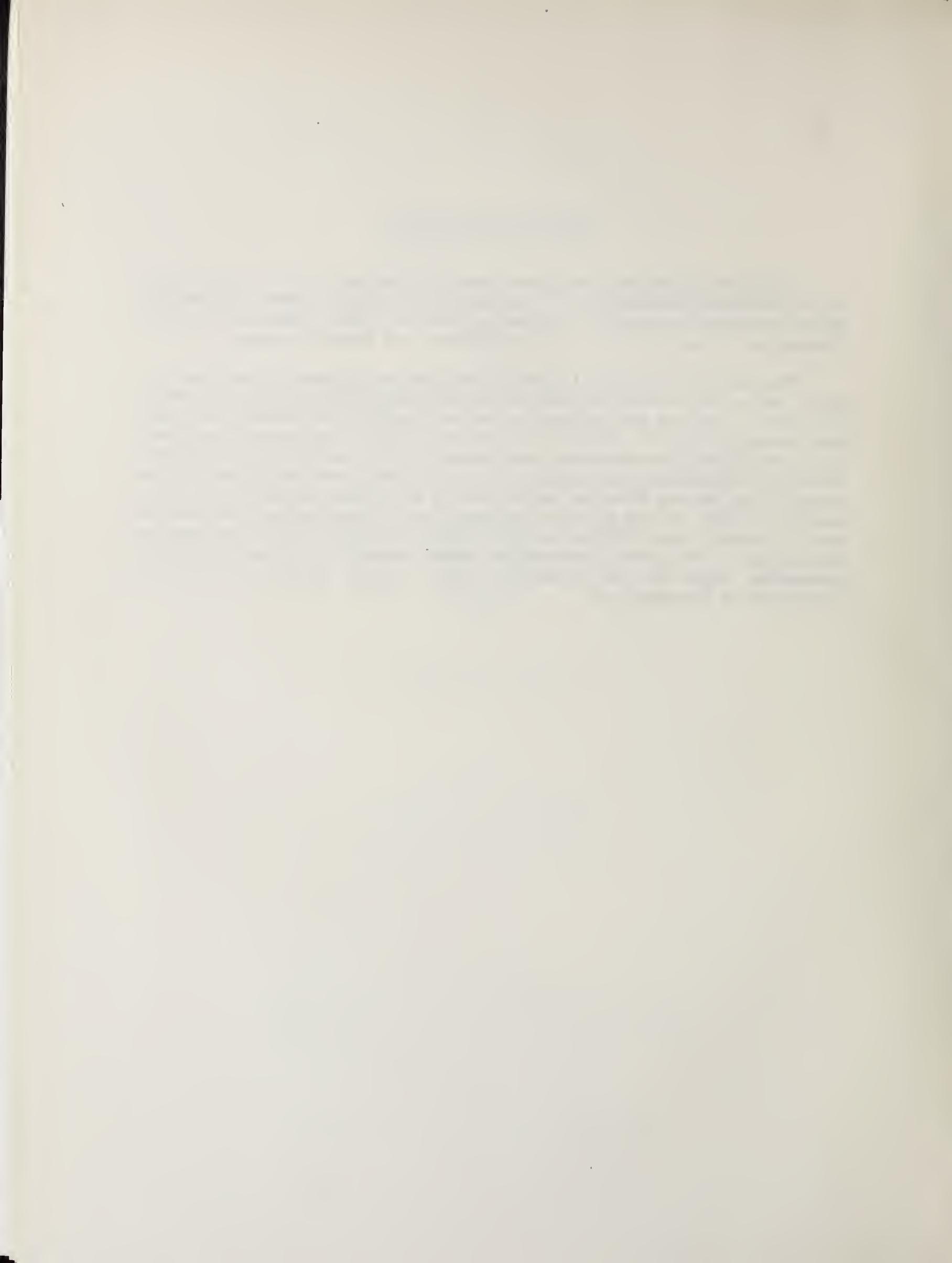


TABLE OF CONTENTS

<u>Item</u>		<u>Page</u>
CHAPTER ONE: EXECUTIVE SUMMARY		1-1
Purpose and Scope		1-1
The Meaning of "Financing Techniques"		1-3
The Meaning of "Innovation"		1-3
Innovative Financing Techniques		1-4
Transit Financing Potentials		1-5
Place in Financial Planning		1-6
Possible Payoffs from Innovative Financing		1-6
Broadening the Financial Base for Transit		1-6
Establishing an Equitable Allocation of Costs		1-7
Exhibit 1.1	Concept of Transit Financing With a Diversity of Funding Sources and Adequate Allocation of Costs	1-8
	Realizing a Higher Return on Transit Investment	1-9
Basic Study Approach		1-10
Organization of the Report		1-10
CHAPTER TWO: CONTEXT AND CONCLUSIONS		2-1
Context of Study		2-1
The Most Promising Techniques		2-3
The Need for Case-By-Case Analysis		2-4
The Need for New Expertise		2-5
The "Young Amendment"		2-5
Comparative Evaluation of Techniques		2-8
Exhibit 2.1	Comparative Evaluation Matrix Innovative Techniques for Financing Transit	2-9
Land Use Regulation		2-10
Incentive Zoning		2-11
Special District Zoning		2-12
Dedications and Exactions		2-13
The Official Map		2-14
Taxes, Assessments and Service Charges		2-15
Dedicated Property Tax		2-16
Tax Increment Financing		2-17
Special Benefit Assessment		2-18
Service Charges		2-19
Public Land Acquisition		2-10
Lease or Sell Air Rights		2-21
Lease or Sell Supplemental Property		2-22
Develop Air Rights or Supplemental Property		2-23
Participate in Property Development		2-24
Financing Potentials of Innovative Techniques		2-25
Toronto		2-25

* Feature Box

Exhibit 2.2	Annual Revenues to TTC From Long Term Land Leases Yonge Subway-Front to Eglinton Toronto, 1976	2-29
Exhibit 2.3	Significance of Revenues from Long Term Land Leases Relative to Costs for Initial Yonge Street Segment Toronto, 1977	2-31
Exhibit 2.4	Revenues from Land Leases Initial Yonge Street Segment 1950-1980	2-32
St. Paul and Houston Packaging Financing Techniques	Type of Financial Requirements	2-33
Exhibit 2.5	Significance of Revenues from Innovative Financing Techniques Relative to Costs for St. Paul Proposed DPM	2-34
Exhibit 2.6	Present Value Calculation Revenue from Connector Fees St. Paul DPM	2-35
Exhibit 2.7	Present Value Calculation Revenue from Special Benefit Assessment St. Paul DPM	2-36
Exhibit 2.8	Significance of Revenues from Innovative Financing Techniques Relative to Costs for Houston Proposed DPM	2-37
Timing of Financial Requirements		2-38
Combining Financing Techniques		2-40
The Literature on Transit Finance		2-40
Exhibit 2.10	Combining Tax Increment Financing and Lease Revenue Bonds: An Illustration	2-41
Key Transit Finance Literature *		2-44
CHAPTER THREE: JOINT DEVELOPMENT		3-1
Types of Joint Development Projects		3-2
Exhibit 3.1	Illustration of Air Rights Above and Below Transportation Right-of-Way	3-4
Origins and Evolution of Experience		3-5
Exhibit 3.2	Significant Joint Development Projects of a Transit-Related Nature in North America	3-7
"Streetcar Suburbs"		3-8
Railroad-Related Joint Development		3-9
Highway-Related Joint Development		3-11
Exhibit 3.3	Prominent Projects Railroad-Related Joint Development	3-12
Transit-Related Joint Development		3-14
Exhibit 3.4	Prominent Projects Highway-Related Joint Development	3-15
"Multi-Level Montreal" and Some Parallel Applications of Area-Wide Pedestrian Systems *		3-17
Exhibit 3.5	Prominent Projects Transit-Related Joint Development	3-19

Joint Development Opportunities	3-24
Increased Transit Ridership	3-24
Assistance in Transit Financing	3-25
Fiscal Support for Local Government	3-25
Increased Opportunities for Local Residents	3-25
Improved Land Use and Urban Environment	3-26
Joint Development Constraints	3-26
Exhibit 3.6 Summary of Constraints Affecting Joint Development	3-28
Literature on Joint Development	3-32
Key Joint Development Literature *	3-33
CHAPTER FOUR: VALUE CAPTURE	4-1
Concepts of Value Capture	4-3
The "Broad Concept"	4-7
The "Narrow Concept"	4-9
Focus for this Chapter	4-10
Transit Impacts on Land Use and Value	4-11
Nature of Transit Impacts	4-12
Exhibit 4.1 Illustrative Office Market Potentials Development Potentials and Transit Impact	4-14
Transit Impacts on Land Use	4-17
Exhibit 4.2 Types of Transit Impacts on Land Use and Land Value	4-18
Transit Impacts on Land Value	4-19
Exhibit 4.3 Illustrative Increases in Land Values as a Result of Transit Improvements	4-22
Exhibit 4.4 Illustrative Zones of Transit Impact Around Station Stop	4-23
Predicting Transit Impacts	4-25
Value Capture Methods	4-27
Real Estate Taxation	4-27
Exhibit 4.5 Possible Methods for Capturing Increases in Land Value as Caused by Public Actions and/or Improvements	4-28
Public Participation in Development	4-30
Improvement Levies	4-31
Betterment Levies	4-32
Value Capture Financing Potentials	4-32
A General Illustration	4-35
Exhibit 4.6 Simplified Income Statement For Prototypical Office Building Showing Residual Land Value at Base Year	4-42
Exhibit 4.7 Simplified Income Statement for Prototypical Office Building Showing Gross Value Increment After Base Year	4-43

Exhibit 4.8	Simplified Income Statement for Proto-typical Office Building Showing Net Value Increment After Base Year	4-44
Exhibit 4.9	Value of Added Tax To Government Under Variety of Discount Rates "Public Accounts"	4-45
Exhibit 4.10	Effect of Real Estate Tax and Capital Gains Tax on Property Owner "Private Accounts"	4-47
	An Analytical Approach to Betterment Levies	4-49
The Metro Center Case		4-49
	Changes in Property Values at Metro Center	4-52
	Map of the Metro Center Impact Area	4-53
	The Metro Center Station As Of Early 1976 *	4-54
Exhibit 4.12	Change in Property Values Metro Center Impact Area	4-55
Exhibit 4.13	Revenue Yield Existing Real Estate Property Tax on Value Increments Resulting from Transit Metro Center Impact Area Washington, D.C.	4-58
Exhibit 4.14	Real Estate Tax Revenues From Transit-Related Increases in Property Value Assuming Prompt Continuing Property Reassessment Metro Center Impact Area Washington, D.C.	4-59
Exhibit 4.15	Real Estate Tax Revenues From Transit-Related Increases in Property Value Assuming Slow, Cyclical Property Reassessment	4-60
Exhibit 4.16	Simplified Income Statement for Metro Center Impact Area Showing Net Value Increment After 1976 Without Betterment Levy	4-62
Exhibit 4.17	Simplified Income Statement for Metro Center Impact Area Showing Net Value Increment After 1976 With Betterment Levy	4-63
Exhibit 4.18	Revenue Yield Betterment Levy and Revised Real Estate Taxes Value Increments Resulting from Transit Metro Center Impact Area Washington, D.C.	4-65
Exhibit 4.19	Revenues from New Betterment Levy on Transit-Related Increases in Property Values Metro Center Station Impact Area Washington, D.C.	4-66
Exhibit 4.20	Real Estate Revenues Lost As A Result of New Betterment Levy and Attendant Reduction in Transit-Related Property Values Metro Center Impact Area	4-67

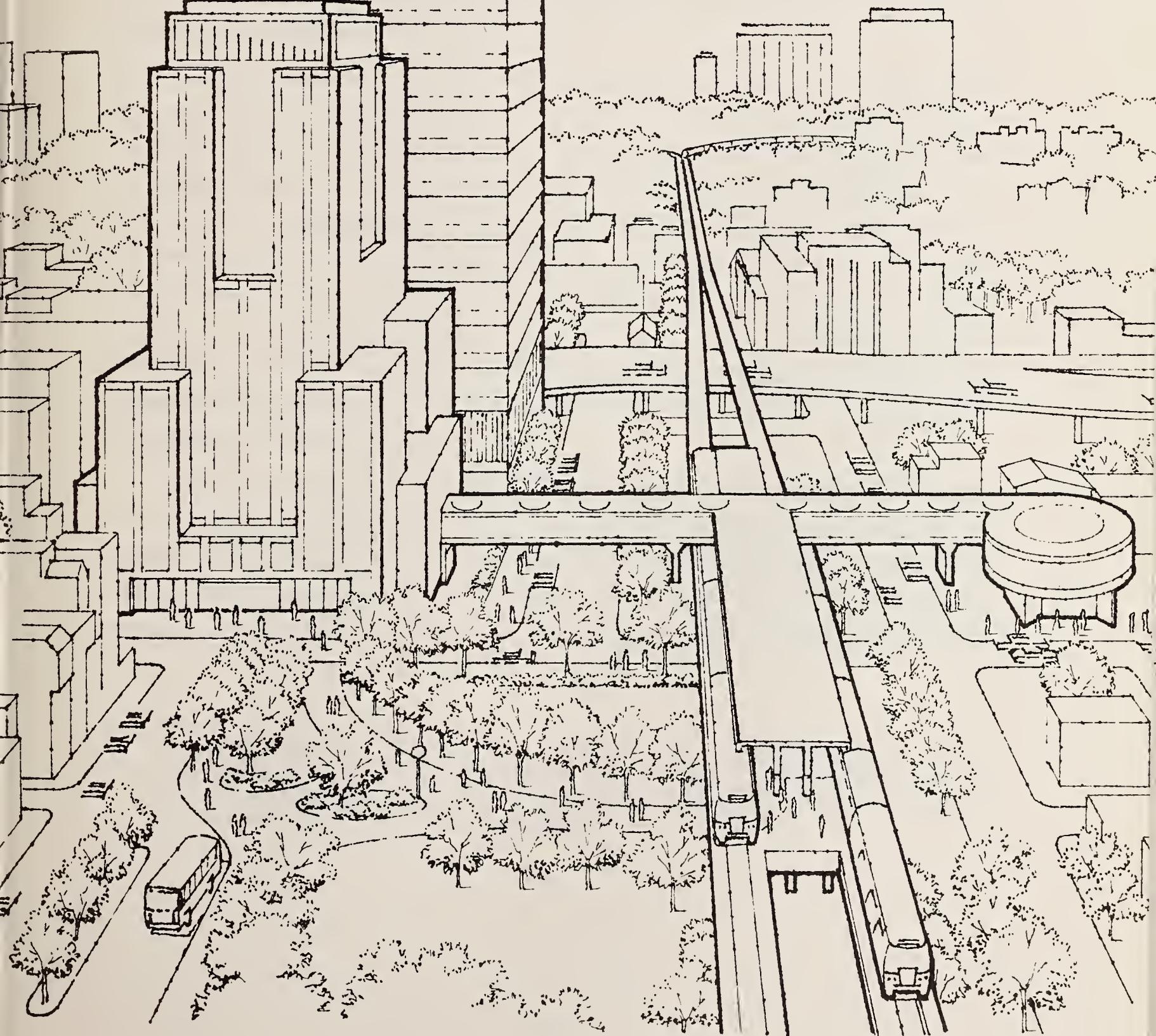
Exhibit 4.21	Recap of Revenue Yield from Existing Real Estate Taxes and Additional Betterment Levy on Transit-Related Increases in Property Values Metro Center Impact Area	4-69
Exhibit 4.22	Property Tax Revenues From all Increases in Property Values Assuming Prompt, Continuous Property Reassessment Metro Center Impact Area	4-71
Exhibit 4.23	Property Tax Revenues From All Increases in Property Values Assuming Slow Cyclical Property Reassessment Metro Center Impact Area	4-72
Exhibit 4.24	Comparison of Alternative Revenue Yield Metro Center Impact Area	4-74
Exhibit 4.25	Summary of Increased Property Values 14 Transit Station Areas Studied by AMRA/OMP	4-75
Policy Implications and Issues		4-76
Financing Potentials from Value Capture		4-77
Practical and Public Policy Problems Affecting Value Capture Potential in AMRA/OMP Case Study Area *		4-78
Property Assessment Practices		4-80
Betterment Levy Administration		4-80
Exhibit 4.26	Selected Attributes of Possible Betterment Levy	4-81
Other Economic Considerations		4-83
The Case for Property Tax Reform		4-83
The Case for a Broader Context		4-85
The Literature on Value Capture		4-87
Key Value Capture Literature *		4-88
CHAPTER FIVE: LAND USE REGULATION		5-1
Exhibit 5.1	Major Steps in the Planning and Pre-Construction Stages of Development	5-3
Incentive Zoning		5-7
Description		5-7
Incentive Zoning in San Francisco's Market Street Area *		5-8
Experience to Date		5-10
Financing Potential		5-11
Institutional Feasibility		5-11
Special District Zoning		5-12
Description		5-12
Experience to Date		5-13
Financing Potential		5-13
Institutional Feasibility		5-14
Dedications and Exactions		5-14

Service Charges	6-31
Description	6-31
Experience to Date	6-31
Rockefeller Center: The Evolution of Access Agreements *	6-32
Financing Potential	6-33
Institutional Feasibility	6-33
Literature on Taxes, Assessments and Service Charges	6-34
Key Taxes, Assessments and Charges Literature *	6-35
CHAPTER SEVEN: PUBLIC LAND ACQUISITION	7-1
Lease or Sale of Air Rights	7-2
Description	7-2
Experience to Date	7-2
Financing Potentials	7-3
Institutional Feasibility	7-4
Lease or Sale of "Supplemental" Property	7-5
Description	7-5
Experience to Date	7-5
Financing Potential	7-5
Institutional Feasibility	7-7
Supplemental Land Acquisition *	7-9
Development of Air Rights or Supplemental Property	7-11
Description	7-11
Experience to Date	7-11
Financing Potentials	7-12
Institutional Feasibility	7-12
Participate in Supplemental Property Development	7-12
Description	7-12
Experience to Date	7-13
Financing Potential	7-13
Institutional Feasibility	7-13
Issues in Public Land Acquisition	7-14
Land Acquisition by Public Agencies: A Conceptual Framework and Terminology *	7-16
Legal Restrictions	7-19
On Determining The Valid Exercise of Eminent Domain *	7-20
Financial Constraints	7-23
Administrative Constraints	7-24
Issues in Public Property Development	7-27
Legal Restrictions	7-27
Administrative Constraints	7-28
Key Public Land Acquisition Literature	7-32
Key Public Land Acquisition Literature *	7-33
APPENDIX A: GLOSSARY OF FINANCE AND DEVELOPMENT TERMS	A-1

Exhibit B.13	Illustrative Retail Overages and Potential Added Land Lease Payment in 5 Years Proto- typical Office Building	B-28
APPENDIX C: INVENTORY OF INVESTMENT INCENTIVES		C-1
Historical Perspective		C-2
Cost-Effectiveness Analysis		C-4
Alternative Forms of Public Assistance		C-4
Public Planning		C-5
Land Assembly		C-7
Project Financing		C-8
Project Improvements, Public Facilities		C-9
Incentives to Private Developers		C-9
Construction		C-10
Marketing		C-11
Property Management		C-11
Alternate Organizational Arrangements		C-12
Baltimore's CC-IHM Inc. *		C-14
Dayton Citywide Development Corp. *		C-16
Michigan's Citywide Economic Development Corp. *		C-21
APPENDIX D: THE TRANSIT-IMPACT-ON-LAND-USE-LITERATURE		D-1
Transit Impact Studies		D-3
Local Area Level		D-4
Impact Area Level		D-5
The Literature To Date		D-6
Key Transit-Land Use Literature *		D-7

Chapter 1:

Executive Summary



EXECUTIVE SUMMARY

Purpose and Scope

This report is designed primarily to assist local decision-makers in identifying the full range of transit financing techniques, more systematically assessing the pros and cons for each local case, and choosing among alternative courses of action. It reviews innovative financing techniques, many of which entail joint development or the notion of value capture, and evaluates the financing potential of these techniques, their institutional feasibility and apparent promise for widespread application in the transit field.

Although to date the innovative techniques covered here have been infrequently used to pay for transit in this country, they have been widely applied to finance other capital improvements.^{1/} Since these innovative techniques tend to involve private investment on land around transit facilities, a further focus of this report is on fixed guideway systems. As a rule, fixed guideway facilities such as commuter lines, standard rail, "light rail" and people movers, tend to foster more focused private development than other forms of transit like buses or para-transit. Fixed guideway facilities are also more liable to generate targeted government investment at key locations such as transit stops, so as to exploit urban economic development potentials (e.g. jobs and tax revenues for the area affected) associated with these facilities.

This full report sets forth rough calculations of transit's impact on land use and the financing potential accruing from the most promising innovative techniques. Such "order of magnitude" calculations provide quantitative insights into likely changes as a result of implementing fixed guideway facilities and certain innovative techniques. In many cases, the magnitude of such change, more than its

^{1/} Generally speaking, the terms "capital improvement" or "capital facility" refer to projects of large size, fixed nature and/or long life (e.g. 15-20 years or more) involving expenditures of a non-recurring nature. For further definition of these and related terms, see Appendix A.

direction alone, is the critical factor. Wherever this is true -- and consideration of innovative transit financing is a case in point -- even crude calculations are vastly superior to none at all.

These calculations also illustrate analytical procedures to identify opportunities, constraints and payoffs for the public sector from applying techniques in specific situations. True, each transit station area development situation requires a case-by-case analysis to account for a broad array of area-specific factors. But the expertise for evaluating these opportunities has been extensively developed in the real estate industry. While requiring application by seasoned analysts, these techniques of market research and feasibility evaluation are used every day to guide private investment decisions, and can similarly serve the government sector.

The present work is part of a larger effort to document the full range of innovative and existing funding for urban transportation. ^{1/} Accordingly, this catalog and companion volumes seek to serve as ready reference tools for community policy makers who wish to identify the relevant experience and available literature for each financing technique.

1/ The distinction between "existing" and "innovative" is somewhat arbitrary, since 1) some existing financing techniques -- even if widely used in some part of the country -- are typically thought of as innovative when applied elsewhere; and 2) many innovative financing techniques -- though little used for transit purposes -- have been generally employed to pay for other types of capital improvements. Nonetheless, existing funding sources and financing techniques for transit would include at least the following:

- general fund and non-automotive taxes: general fund, real property tax, retail sales tax, payroll and wage tax, public utility charges, and excise taxes such as on cigarettes;
- motor vehicle-based taxes: motor vehicle fuel taxes, excise tax on auto ownership (vehicle charges), use of toll revenues (toll fees), parking charges and taxes on public and private parking spaces; and
- a variety of methods other than annual appropriations or tax dedications: such as local government borrowing and debt financing, purchase of service agreements and tax relief for providers of transit service.

For a review of the above and other financing methods, see forthcoming transit financing guide by the Institute of Public Administration.

The Meaning of "Financing Techniques"

"Financing technique" refers to all means of paying the capital or operating costs of mass transit. This formulation covers a diversity of financing problems, from paying for new transit facilities, to financing operating deficits of existing systems, to subsidizing transportation service for low income or otherwise disadvantaged groups. Other than borrowing, cities can meet these financial requirements of transit in four basic ways:

- Increasing productivity or reducing costs, at times with reductions in service;
- Shifting service responsibilities, or some share of the financial burden, to other levels of government (e.g. to county, state or federal jurisdictions);
- Increasing revenues from existing sources at the local level (e.g. through higher transit fares or general taxes); and/or
- Increasing revenues from new sources (e.g. special benefit assessments, lease or sale of air rights acquired in the course of transit construction).

This catalog concentrates on the last category, and specifically on new sources of funds for transit through innovative financing techniques.

The Meaning of "Innovation"

The notion of "innovation" normally suggests an entirely new concept and sometimes a dramatic "breakthrough" with substantial benefits to all concerned. These connotations are not intended for the term "innovative financing techniques," as used in this catalog. Rather, the innovation referred to here involves an introduction of financing techniques from one field to another (e.g. from capital improvements programming to new uses in urban transportation) or from one area

to another (e.g. from Canada to the U.S.) ^{1/}. Moreover, the financing potentials of these "new" techniques (to the transit field) tend to be modest, if measured against existing revenue sources for transit (e.g. the fare box) or typical financial requirements (e.g. the costs associated with major regional systems). Frequently, these systems are the largest single public works project ever undertaken in urban centers, with capital costs mounting into the billions of dollars, and annual operating deficits (depending on fare structure and related factors) on the order of tens of millions of dollars.

Innovative Financing Techniques

Innovative financing techniques can be grouped into three broad categories:

- Land Use Regulation, usually over areas affected by transit improvements. Techniques here range from incentive zoning, to special district zoning, to dedications and exactions, to use of the official map. Some of these can involve indirect financing, whereby the cost for transit-related facilities is shifted from the public sector to the private sector.
- Taxes, Assessments and Charges, typically imposed over limited areas in ways that attempt to relate the levy to benefits received. This second broad category includes dedicated property taxes levied over a small-area local district (as distinguished from, say, the San Francisco or the Denver varieties, which are region-wide in application); tax increment financing, special benefit assessment, and service charges (either on a one-time or recurring basis) for connecting the transit station to adjoining properties.
- Public Land Acquisition, which commonly involves some assembly of property by government, though there is some variation

1/ This more focused meaning of "innovation," involving the introduction of a product or process that is new to the user in business or government, is consistent with use of the term in the R + D (research and development) field. For example:

"An innovation is an idea perceived as new by the individual. It really matters little, as far as human behavior is concerned, whether or not an idea is 'objectively' new as measured by the amount of time elapsed since its first discovery. It is the newness of the idea to the individual that determines his reaction to it..."

Everitt M. Rogers, The Diffusion of Innovation (Free Press of Glenco: 1962) p. 13.

among the individual techniques. These include lease or sale of air rights (already acquired in the course of transit construction), lease or sale of supplemental property (normally acquired in excess of transportation rights-of-way), and participation in or development of air rights to supplemental property (with government assuming an equity position or acting as actual developer.)

Most of the above have been successfully employed by U.S. cities in a non-transit context. Many are legally feasible and practicable for transit applications. A common denominator of these techniques is their reliance for transit financing purposes on private investment in land around transit facilities or station areas. Most, in fact, require the development of new revenue-producing land uses for financing potentials to be realized. Such techniques work well (and sometimes only) where "micro" area real estate markets are strong and other development factors (e.g. availability of land, suitable zoning) are favorable. In some cases, other supporting actions by government (beyond transit improvements per se) may be required to trigger private investment and exploit financing potentials fully.

Transit Financing Potentials

From analysis completed for this assignment, it appears that a combination of innovative financing techniques could defray perhaps 5 to 15 percent of the capital costs associated with certain fixed guideway facilities. For example, these facilities might comprise a "light rail" line constructed in a central city or a small area system such as a DPM (downtown people mover). These results, judged reasonable under an ambitious but achievable application of innovative financing tools, suggest an important contributory role which can be played by innovative techniques within the larger constellation of transit funding sources. Specifically, these techniques might pay a material part of the local share for federally-assisted transit improvements, a significant funding requirement in most U.S. communities.

This finding on financing potentials, though somewhat less than suggested in previous studies, ^{1/} is not surprising in view of the substantial costs associated with

^{1/} These previous estimates placed financing potentials conservatively at approximately 20-40 percent (and in some cases up to 100 percent or higher), as compared to the capital cost of transit improvements. See Chapter 4 for details.

most fixed guideway systems. Nor does this finding suggest that innovative techniques should be ignored in formulating transit finance plans. Rather, the appropriate role of innovative techniques needs to be considered in the context of other available revenue sources, and in light of local economic and political conditions.

Place in Financial Planning

Determining the proper role for these innovative tools requires making a financial plan for transit, including:

- developing public policy objectives (e.g. level of service to be provided, degree of subsidy desired);
- forecasting financial requirements (notably capital costs, if called for, and revenue and expense projections over time); and
- determining an appropriate fare structure, and an allocation of transit financial requirements (costs) by type of revenue source available.

Such steps are required for all financing methods, for that matter, whether or not the innovative techniques are used. This analytical process depends importantly on case-by-case determinations, but there are general considerations about the appropriate role of innovative financing techniques that may bear on specific local situations.

Possible Payoffs from Innovative Financing

Considerations which should be weighed by community decision makers in light of local conditions include the potential advantages of diversifying revenue sources for transit, establishing a more equitable basis for transit finance, and enhancing the overall return from public investment in transit.

Broadening the Financial Base for Transit

One consideration is that fares alone may never approach the levels necessary to support transit operations. Nor are prevailing funding arrangements -- whereby a transit authority annually passes the cup among various jurisdictions and levels of government -- necessarily a satisfactory solution. On the contrary, financing capital intensive transit projects may well require a diversified array of funding

from federal, state and local government, and possibly private sources. Consequently, even the relatively modest financing potentials of innovative techniques should prove important to many U.S. communities, where there is growing agreement that transit needs to develop new sources of funds for capital and operating purposes. As a practical matter, innovative financing techniques represent one of the few untapped sources of funds remaining for transit in this country.

Establishing an Equitable Allocation of Costs

Transit beneficiaries frequently extend beyond direct users (regular riders of the system) to encompass both 1) neighboring property owners and business interests in areas immediately served by transit, as well as 2) the public at large. Therefore, it may be equitable that costs of transportation service be borne not only by direct users but by these other beneficiaries of the system.

This thinking suggests an allocation of transit costs commensurate with benefits received, to spread cost among direct users (e.g. through fares), neighboring property owners (e.g. through levies on adjacent properties) and the public at large (e.g. through general purpose revenue sources such as the sales tax).

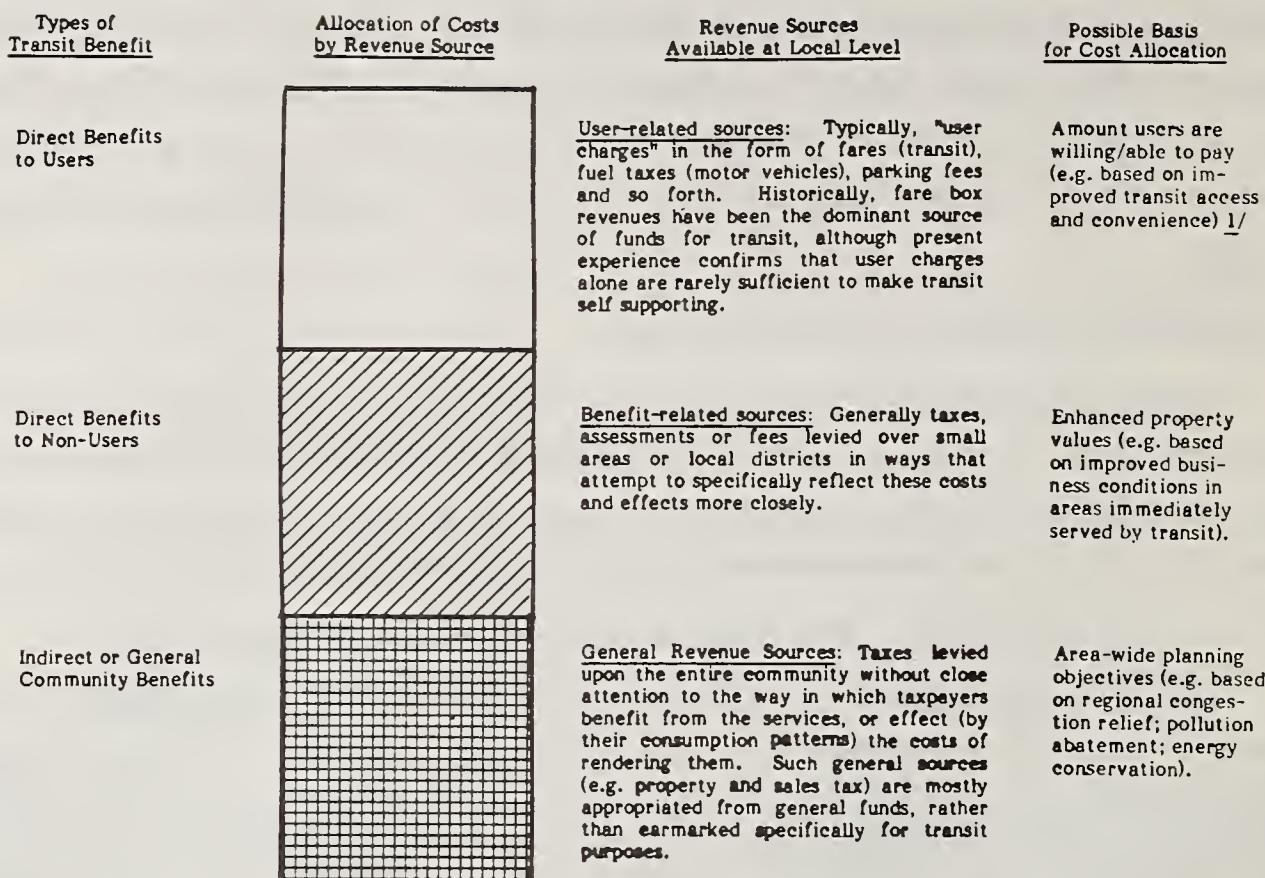
Allocating transit costs in this manner among these three revenue sources would be consistent with the well-established utility principle of cost recovery, a concept stated some fifty years ago:

"To place the full burden of cost of rapid transit service on the passengers does not seem just, in view of the collateral advantages which flow to the neighboring property owners in the form of enhanced values and the business interests and public at large by reason of increased prosperity and convenience. Neither does it seem wise to raise the fare to levels that will discourage travel and thereby work against the parent purpose of regional planning — relief from congestion. An equitable division of cost of service between passengers through fare, the neighboring property owner through assessment, and the businessman citizen through general taxation should make feasible the timely expansion of rapid transit facilities without weighing too heavily upon any of the interests affected." ^{1/}

This concept is illustrated in Exhibit 1.1, page following.

1/ The Regional Survey of New York and Its Environs, Volume IV, Traffic and Transportation, 1928.

**CONCEPT OF TRANSIT FINANCING
WITH A DIVERSITY OF FUNDING SOURCES
AND EQUITABLE ALLOCATION OF COSTS**



Note: Allocation by revenue source as shown above is illustrative only. Also, does not reflect revenue sources from other levels of government (e.g. state or federal). For example, various U.S. Department of Transportation programs are available through the Urban Mass Transportation Administration (UMTA) or the Federal Highway Administration (FHWA), including:

- UMTA Section 3 (Discretionary Capital Assistance Program) funds can support such improvements as fixed guideway systems, transit stations, etc. UMTA section 3 funds are available on an 80 percent Federal-20 percent Local sharing basis.
- UMTA Section 5 funds (Formula Funding Program) are also available to support capital improvements on a 80-20 basis although most urban areas are fully utilizing their funds already for operating costs.
- UMTA Section 6 (Research, Development and Demonstration Program) funds have been used in the past to develop and test new kinds of transit improvements. UMTA continues to be open to demonstrate innovations on an experimental or exemplary basis.
- UMTA Section 9 (Technical Assistance Program) funds can be used for technical studies for planning and design of transit facilities.
- Federal-Aid Urban Systems (FAUS) funding is available on a 70 percent Federal-30 percent Local sharing basis. FAUS funds are an apportioned funding source and are normally totally committed to other highway projects.
- Interstate Highway Transfers, which can fund public transportation facilities and/or equipment as substituted for previously approved portions of the Interstate highway system.

Additionally, transit financing could draw on other federal programs at the federal level (e.g. through the U.S. Department of Housing and Urban Development, or the Economic Development Administration of the U.S. Department of Commerce) or such state assistance as is available.

1/ This category could also be based on benefits to motor vehicle users (e.g. in the form of relief from congestion); such motor-vehicle derived revenues have been an important source of funds for transit in several areas.

Source: U.S. Department of Transportation; Institute of Public Administration; Gladstone Associates.

Realizing a Higher Return on Transit Investment

Finally, judicious application of innovative financing techniques could realize a higher return on public investment in transit, with benefits beyond urban transportation alone. Thus conceived, transit could be a means to multiple public objectives (e.g. central city revitalization, urban economic development, energy conservation). This larger potential of transit can be enhanced by most innovative financing tools, particularly techniques which involve intensive land use around transit facilities.

Such development, in turn, is frequently contingent on favorable market factors, assembled land at affordable prices and suitable zoning. These development factors are largely beyond the immediate control of the transit entity once route alignments and stations are located, and may be seen as a needless bother by those public officials primarily concerned with the construction and operation of fixed guideway systems. However, taking land into account during transit development would give the public an added pay-off from its transit investment.

Exploiting many innovative financing techniques, for instance, would entail substantially greater attention to development potentials in decisions about route alignment and station location than is presently the case in most transit planning efforts. Transit station areas planned in this manner -- by virtue of their superior accessibility and other advantages -- could become magnets for new activity centers with a mix of mutually supporting commercial, residential, and institutional development.

For transit, too, there can be an important pay-off from such coordinated development. More intensive use of land, higher densities around transit stations, new activity centers — the natural consequences of coordinated development — could create and attract new transit riders, and greater ridership is what a transit system needs in order to sustain its high operating costs and justify itself as a cost-effective investment. Seen in this broader context, innovative financing techniques could even create a "self-executing economic incentive" for public officials to implement the kinds of land use and development patterns that support taxpayer investment in transit, and help to guarantee the system's success.

Basic Study Approach

Preparation of this catalog began with a review of the relevant public finance literature, selected contacts with experienced practitioners in this field, and experience of the authors as to financial requirements, funding sources and financing techniques for large-scale capital improvements. These initial steps provided the basis for drawing informed judgments about the financing potential and institutional feasibility of each innovative technique, as well as the adequacy of available literature in each area. This general assessment was then developed further through a specific evaluation of salient advantages and disadvantages associated with the most promising techniques, along with an analysis of their likely financing potential, using representative assumptions as to base, rate, resulting yield and other factors. The limited experience to date with innovative financing techniques was also reviewed as another benchmark for estimating revenue potentials of these tools for transit financing purposes.

A more detailed, step-by-step description of the study approach is set forth in Appendix B to this report. In overall terms, though, the conduct of significant empirical research was not contemplated in the scope of this assignment. Rather the study team was asked primarily to review existing reports, to integrate key findings and conclusions, and to render informed judgments about the financial potentials and institutional feasibility of the most promising innovative techniques. Hence much of this report draws on previously published studies, which are cited extensively throughout and referenced with respect to specific subjects at the conclusion of each chapter.

Organization of the Report

The remainder of this report comprises six chapters and four technical appendices. Each chapter deals with a separate substantive aspect of this study, as follows:

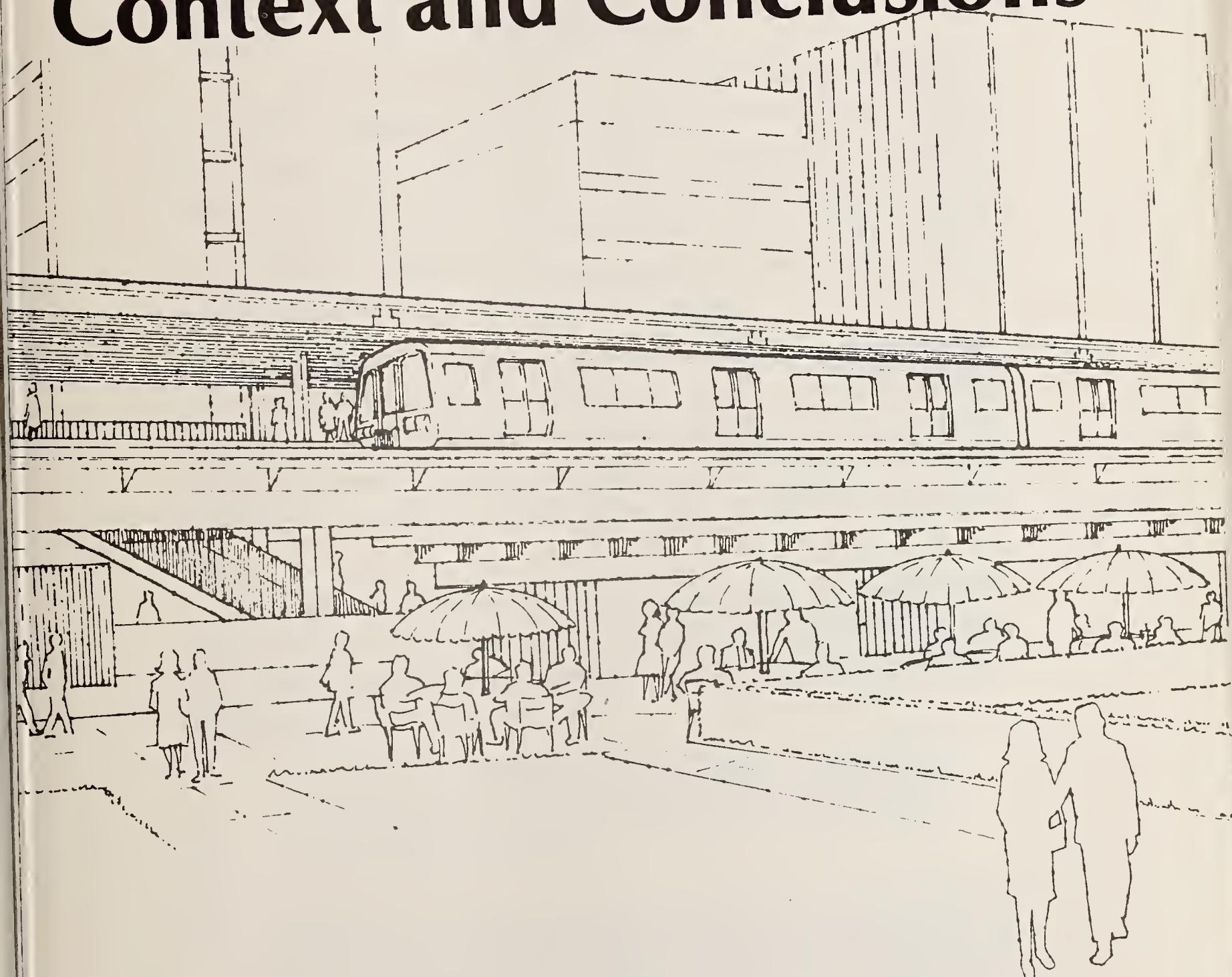
- Chapter 2, Context and Conclusions; summarizes the salient background for the study and further details on main conclusions with respect to the comparative advantages and disadvantages of 12 innovative techniques, estimates of their transit financing potential, and considerations as to "packaging" techniques for a specific transit improvement.

- Chapter 3, Joint Development; sets forth a definition of joint development, profiles significant joint development projects (of a railroad-, highway-, and transit-related nature), and reviews the opportunities and constraints that affect the feasibility and ultimate success or failure of such projects.
- Chapter 4, Value Capture; considers several definitions of this concept, explores key economic issues, reviews experience to date, and outlines an analytical process for estimating the financing potentials associated with various value capture schemes.
- Chapter 5, Land Use Regulation, 6, Taxes, Assessments and Charges, and 7, Public Land Acquisition; serve to define techniques in each category respectively, review experience to date, and assess the financing potential and institutional feasibility of the most promising techniques.

Appendices to the report are largely of a technical nature, including a glossary of finance and development terminology (Appendix A), study approach and methodology (Appendix B), an inventory of investment incentives (Appendix C) and an overview of the transit-related-impact-on-land-use literature (Appendix D).

Chapter 2:

Context and Conclusions



10-1

CONTEXT AND CONCLUSIONS

There is growing agreement that transit needs to develop new sources of funds for both capital and operating purposes. A brief review of reasons for this current thinking and recent trends in transit development will form a useful background to major findings and conclusions reported more fully in this chapter.

Context of Study

The case for greater diversification of transit funding in general and for innovative financing techniques in particular has been stated in several ways. Some public officials have advanced the view that, among the various transportation modes, only mass transit is without an effective way to meet its financial requirements solely from direct user charges. Fares are never likely to approach the levels necessary to cover operating costs, let alone the amortization of capital for new systems.

Other observers have argued that many transit investments — most notably metropolitan-wide rapid rail systems — cannot be justified based on transportation costs and benefits alone, but must have related urban development benefits. Where such benefits are expected, it seems not unreasonable to expect that beneficiaries from the system help pay the costs.

This thinking, along with growing awareness as to real limits on the public investment capital available for new projects, suggests several less costly ways of providing fixed guideway facilities than through full-scale regional rail systems. These include:

- "incremental development," whereby transit is extended by segments over time (instead of constructing a full network), in an open-ended process that responds to evolving transportation requirements; 1/ and

1/ In many cases, transit construction in this country and Europe was carried out as an incremental process, with initial segments built in the central portion of a city — where traffic density was already high enough to justify high capacity service — followed by extensions and branch lines, usually a few miles at a time.

The first New York subways were large systems, however, and in the post World War II period, more ambitious, region-wide systems appeared to become the rule (Stockholm, Milan, and Munich in Europe and BART and METRO in this country), with the Toronto and Cleveland systems — both built incrementally — being the exceptions.

- consideration of "light rail" lines, 1/ or implementation of automated "downtown people mover" (DPM) systems, as substitutes for high capacity subway links. 2/

While few would suggest these new approaches as universal solutions, each represents a valuable addition to the existing array of transit options, from which communities may select the alternative -- or more probably a combination -- that best fits local needs and budgets. Indeed, a strategy of "incrementalism" in transit improvement, that focuses on present deficiencies and immediately foreseeable needs, might result in gradual improvement using several forms of transit service (e.g. scheduled buses, followed by exclusive bus lanes, followed by some form of fixed guideway) in response to growing demands for high capacity movement systems along heavily travelled corridors.

Typically, the benefits from such incremental development or smaller-scale systems appear more localized than for the larger, region-serving systems. Accordingly, more reliance on revenue raising methods over less than a regional scale seems indicated (e.g. a single local jurisdiction or several small area districts), along with closer linkage between financing techniques and benefits received (e.g. through levies on adjacent properties in transit station areas).

- 1/ Currently, several U.S. cities are actively planning light rail transit systems, notably Pittsburgh, Pennsylvania and Buffalo, New York. A recent report released by the U.S. Department of Transportation contains a comprehensive review of LRT operating experience in Western Europe and North America, and suggests that light rail is a viable transit alternative for U.S. cities as well. See DeLeuw Cather and Company, Light Rail Transit: State of the Art Review, a report prepared for the Urban Mass Transportation Administration (U.S. Government Printing Office: Spring 1976).
- 2/ In December 1976, four cities -- Cleveland, Houston, Los Angeles, and St. Paul -- were selected as sites for a nationwide demonstration project to assess the transportation and urban development benefits of automated DPM systems. An additional three cities -- Detroit, Miami and Baltimore -- received conditional approval, and the program has been expanded subsequently to include Indianapolis, Jacksonville, Norfolk and St. Louis. The demonstration is being sponsored by the U.S. Department of Transportation's Urban Mass Transportation Administration (UMTA).

To this end, one largely untapped source of funds for transit, beyond the fare box and general fund revenues, consists of innovative financing techniques, so called because they tend not to have been employed in a major way to pay for transit. These innovative methods may involve tax techniques (typically levied over small area districts in ways that attempt to relate the tax to benefits received), land use regulation (in areas affected by transit construction and operation) and/or public land acquisition (such as leasing air rights acquired as part of approved rights-of-way, or developing supplemental property acquired beyond the direct needs for transit construction).

The Most Promising Techniques

Most of the innovative financing techniques covered in this catalog have been successfully employed in U.S. cities to pay for a variety of capital improvements, either directly or indirectly (e.g. the latter through developer provision of public amenities as a condition of zoning approval). Many are legally feasible and practicable for transit applications. The most promising methods include tax techniques (dedicated property tax, tax increment financing, special benefit assessment), lease or sale of air rights already acquired in the course of transit construction, and incentive zoning in areas served by transit. "Promise" here refers to the financing potential of these techniques, their institutional feasibility and their apparent scope for widespread application in the transit field. As noted earlier, a common denominator of most techniques considered in this catalog is their reliance for transit funding purposes on private investment in land around transit facilities or station areas.

Not all innovative financing techniques, however, need necessarily involve joint development or the notion of value capture.^{1/} With

^{1/} These concepts are defined and explored in Chapters 3 and 4 of this catalog, respectively. Generally, "joint development" refers to the planning and execution of commercial, office, residential and related development as part of transit design and construction. "Value capture" usually refers to the recouping of a portion of the increased real estate values generated as a result of transit investment. While reasonably accurate descriptions of the results, these short-hand references to joint development and value capture fall short of explaining how these results are accomplished, a subject left to later chapters.

reference to joint development, for example, a dedicated property tax or special benefit assessment could be applied to established properties, without waiting for new construction. Likewise, with reference to value capture, tax increment financing does not capture added property values, since no new taxes are levied. Thus, the innovative financing techniques considered in this catalog comprise a somewhat broader category than the concepts of joint development or value capture.

The Need for Case-By-Case Analysis

Furthermore, it is important to recognize that the specific financing potential and institutional feasibility of innovative techniques require a case-by-case determination which largely depends on local conditions. Adequate local administrative resources and existing or available state enabling legislation, are among the necessary institutional prerequisites. Consequently, it cannot be said that even the most promising techniques can be implemented in every community. And even where the financing techniques are institutionally feasible, local economic conditions will typically confine the scope for applying innovative financing techniques to a small number of locations (e.g. high density transit station areas, characterized by strong real estate markets and other favorable factors such as suitable zoning, and availability of assembled land). ^{1/}

As a result, many findings outlined here are suggestive rather than absolute. In no case can these illustrations and general assessments substitute for experienced analysis and professional judgment, exercised with respect to a specific financing technique in light of local economic and political conditions.

1/ Where these conditions are not sufficiently strong, it may still be possible to encourage private investment through one or a combination of incentives which may be employed by the public sector. Appendix C contains an inventory of these incentives. Generally, however, to the extent such incentives entail additional public investment in transit station areas there would be a corresponding reduction in transit financing potentials, at least for the immediate future.

The Need for New Expertise

It is clear that innovative financing techniques represent an untapped source of transit revenues that most localities have been slow to investigate. A major stumbling block in exploiting these potentials is that many transit entities do not have the expertise, at present, to identify and pursue these new financing possibilities. Moreover, some local jurisdictions are small and most are hard pressed financially — two characteristics which adversely affect both their ability to hire professionals in this area, and to engage in the extensive planning and entrepreneurial activities called for by most innovative techniques. In addition, real estate development expertise is less available now, as urban renewal activities have been discontinued and redevelopment authorities dismantled in many communities.

To exploit these potentials, therefore, most transit entities must access new expertise. This could occur through expanding its own team of real estate development professionals, through work with local urban renewal authorities or economic development entities, through "contracting out" to an experienced development organization, whether public or private, or through creation of a new entity (e.g. a transit corridor development corporation). To this end, new federal funding may also be needed.

The "Young Amendment"

Under the so-called "Young Amendment" of 1974,^{1/} UMTA now has specific legislative authority to create transit corridor development authorities and to assist localities in the acquisition of land around transit stations for purposes of coordinated development. In contrast to UMTA's previous authority, federal financial assistance can now be earmarked

^{1/} Actually amendments sponsored by then-Representative Andrew Young of Atlanta, to the Urban Mass Transportation Act (P.L. 93-503). The amendments enlarged UMTA's local funding authority in Sections 104(a) and 104(b) under Section 3 of the Act.

specifically for the acquisition of land or buildings within a broad area affected by construction and operation of transit, rather than being limited to right-of-way alone. The leverage possibilities of this provision appear substantial, although thus far UMTA has issued no regulations on the Young Amendment and the experience as of this writing under the new legislative authority is still somewhat limited.

The first major grant applications under the Young Amendment — submitted by the cities of Denver and Baltimore -- are now under active review by UMTA. The Denver plan comprises two major transfer facilities, one at each end of the proposed downtown transitway mall along 16th Street between the Civic Center and Larimer Street. The transfer facilities would accomodate terminals for express bus service to the downtown, points of transfer between bus and transitway vehicles, and other development of a commercial and/or residential nature. The Baltimore proposal, which could involve \$10 million in UMTA funds, calls (among other things) for redevelopment of an entire city block adjacent to one of the downtown transit stations. The project, called Baltimore Gardens, includes creation of a sunken landscaped plaza, surrounded on two sides by a retail complex, and an elaborate system of walkways that would connect the Lexington Market transit station with adjacent department stores.

To date, no well defined federal policy exists for these types of projects. But UMTA's encouragement of grant applications under the Young Amendment has been guided by several principles:

"First, we are inclined to take a broad view of the concept of coordinated development. Joint development projects, in our view, are not confined to structures housing transit stations or bus terminals. They may also involve pedestrian facilities (malls, underground concourses, skywalks) that contribute to the physical and functional integration of the development; revenue-producing office and commercial facilities that are built as an integral part of a transit project in order to maximize economic return on the public investment and to bring about city redevelopment; and public improvements and amenities that might contribute to the enhancement of the environment within the zone affected by the construction and operation of the transit project.

Second, we regard the federal role in coordinated development largely as a catalyst for the commitment of private sector resources. In most cases the prospect of a new rail transit line or a downtown mall, combined with supportive local actions, should provide a sufficient incentive to trigger private investment. In such cases, the federal role may be limited to supporting planning activities and encouraging cooperation among transit authorities, urban redevelopment authorities, and private real estate developers in "packaging" the project. In areas where the market is less strong, the Department of Transportation stands ready to consider, under certain conditions, grants or loans for land acquisition and clearance, utility relocation, site preparation, and provision of public infrastructure within the zone affected by the construction and operation of the transit improvements. Any federal assistance in such ventures would be conditioned on substantial participation and evidence of a serious commitment by the private sector to specific joint development projects.

Finally, UMTA's policy on rail transit requires that cities proposing to build fixed-guideway facilities with federal assistance commit themselves to land use policies and development incentives that stimulate complementary real estate development in corridors whose existing densities and travel volumes are insufficient to support the operation of rail transit on a cost-effective basis. This is not to say that this policy requires high-density development around every transit station. We recognize the desire of local communities to preserve the character of established neighborhoods and the inability of local governments to accommodate increased growth in every location. Thus, other steps to attract transit patronage (e.g. through provision of feeder services and parking facilities at transit stations) could be substituted in locations where higher densities are not deemed feasible or desirable." 1/

Federal funds for such projects could also come from other public works or economic development programs (e.g. out of EDA or HUD, including the latter's Urban Development Action Grant Program).

1/ C. Kenneth Orski, UMTA's Associate Administrator for Policy and Program Development, in the winter 1977 issue of the Transportation Research Board's Land Use and Transportation Newsletter.

Comparative Evaluation of Techniques

A central objective of this study has been to assess in general the financing potential and practical feasibility of a broad range of innovative transit financing techniques. To this end, a total of 12 techniques were selected for evaluation in terms of financing potential, institutional feasibility, scope for use in U.S. cities and — in light of these three criteria — apparent promise for application to transit financing.

Summary findings are set forth in a comparative evaluation matrix (next page), followed by a several-paragraph synopsis of each technique (pages thereafter) describing the key advantages and disadvantages of these tools. It should be stressed that these summary statements seek simply to highlight issues and conclusions, and are no substitute for the detailed discussion of each technique contained in subsequent chapters. The logic and steps in this evaluation process, which leads to conclusions presented in this chapter, are outlined in Appendix B to the report.

COMPARATIVE EVALUATION MATRIX
INNOVATIVE TECHNIQUES FOR FINANCING TRANSIT

Approaches/Techniques**Land Use Regulation (Chapter 5)**

1. **Incentive Zoning:** Transit or development entity benefits from incentives that encourage desirable land use and associated improvements at a particular location (e.g., a density bonus in the form of extra floor space for new buildings in exchange for developments which are directly connected to transit).
2. **Special District Zoning:** Transit or development entity benefits from detailed public planning and special zoning for areas adjacent to transit (e.g., developer provides pedestrian amenities or contributes to a transit improvement fund as a condition for zoning approval).
3. **Dedications and Exactions:** Transit or development entity receives from private developers a mandatory provision of land or public facilities (dedication) or cash (exaction) as a condition for subdivision approval, rezoning or other development requests.
4. **Official Map:** A transit or development entity benefits from an official map, which typically precludes building permits for land assigned to future public uses such as transit, highways, or other major public facilities.

Taxes, Special Assessments and Service Charges (Chapter 6)

5. **Dedicated Property Tax:** Transit or development entity levies (or receives, per agreement) a tax on the assessed value of land and/or improvements within designated district served by the transit system.
6. **Tax Increment Financing:** Transit or development entity levies (or receives per agreement) all or part of property tax increases beyond a "frozen base" within a specified area served by transit.
7. **Special Benefit Assessment:** Transit or development entity levies (or receives per agreement) a charge against property in a specified district (e.g., within a 2,500 foot radius of a transit stop).
8. **Service Charges:** Transit or development entity levies (or receives, per agreement) a one-time or continuous charge in return for connection of an adjoining property to transit (e.g., fee for direct tie-in to transit facility).

Public Land Acquisition (Chapter 7)

9. **Lease or Sell Air Rights:** Transit or development entity acquires air rights as part of approved transportation right-of-way, then leases or sells space above or below the transit improvement.
10. **Lease or Sell Supplemental Property:** Transit or development entity acquires supplemental property (i.e., more than actually required to build the transit improvement) then leases or sells the land or related development rights.
11. **Develop Air Rights/Supplemental Property:** Transit or development entity acquires air rights and/or supplemental property, then develops and subsequently holds or sells the resulting real estate project(s).
12. **Participate in Property Development:** Transit or development entity contributes equity (e.g. land) or extends loans or loan guarantees as part of project financing thus assuming a share of the risk as well as a share of the return.

	Financing Potential	Institutional Feasibility	Scope for Use In U.S. Cities	Overall Premise for Transit Finance
1. Incentive Zoning	High	High	High	High
2. Special District Zoning	High	Low	Low	Low
3. Dedications and Exactions	Low	High	Low	Low
4. Official Map	Low	High	Low	Low
5. Dedicated Property Tax	High	High	High	High
6. Tax Increment Financing	High	Low	High	High
7. Special Benefit Assessment	High	High	High	High
8. Service Charges	High	Low	High	High
9. Lease or Sell Air Rights	High	High	High	High
10. Lease or Sell Supplemental Property	High	Low	Low	Low
11. Develop Air Rights/Supplemental Property	High	Low	Low	Low
12. Participate in Property Development	High	Low	Low	Low

Legend:

Land Use Regulation

Land use regulations — mainly zoning and subdivision controls — are the chief tools used by local government today to guide urban growth and development. Major techniques in this category are incentive zoning and special district zoning (two relatively recent refinements of conventional zoning regulation, which normally applies to individual lots) and dedications and exactions (which usually work through the subdivision process governing creation of lots out of larger tracts, typically in suburban areas). ^{1/} Also covered in this category is another form of regulation, much less widely used: the official map, which designates areas in advance for later public acquisition and use as streets, parks or other public facilities such as transit.

Normally, these land use regulation techniques are not able to finance transit directly. However, they are important for several related reasons:

- first, the land use regulations considered here are capable of at least some indirect financing for transit-related improvements (e.g. provision of public amenities such as pedestrian connections to station -- possibly incurred at private cost as a condition of zoning or subdivision approval);
- second, land use regulation techniques can be helpful in attracting private investment around transit, and hence providing a basis for other financing tools (e.g. tax increment financing or special benefit assessment); and
- third, the zoning and subdivision process is presently in use throughout the country, has been legally sanctioned as a local government power and thus forms an existing framework for implementing these innovative techniques.

^{1/} Since dedications and exactions are typically implemented through the subdivision process they are considered here to be in the land use regulation category; however, they are often viewed by local governments as alternatives to special benefit assessments as a way of paying for public improvements, and consequently could be considered as types of charges as well.

Typically, these techniques rely on the first of four government powers — the police power restricting property ownership rights.

Incentive Zoning

Simply stated, incentive zoning involves providing relief for a developer from restrictive zoning provisions (e.g. by granting a density bonus and/or speeded-up development review) in return for performance of functions deemed in the public interest (e.g. inclusion of specified amenities or uses in the developer's project). Incentive zoning appeared in North American cities during the late 1950's and early 1960's. New York City, a pioneer in this technique, offered density bonuses in return for provision of open plazas and arcades, an approach which was widely employed in redeveloping Sixth Avenue during the 1960's and early 1970's. However, application of this technique to transit has been limited to date, the three main examples being around downtown transit station areas in Toronto (along the Yonge Street line), San Francisco (along Market Street, within the incentive zoning district there, which extends from Embarcadero Station), and Chicago's Urban Transportation District (in anticipation of the Monroe Line and Franklin Line stations in the CBD).

A salient advantage of incentive zoning is its reliance on proven police powers and an existing administrative framework. For this technique to be effective, existing zoning around transit should be restrictive, or else a developer has little incentive to voluntarily comply, and will likely proceed with conventional, as-of-right development. Where downzoning is required to reach these restrictive levels, political controversy is likely. Also, incentive zoning (like other innovative techniques in this category) requires somewhat more planning and administrative expertise than the fairly straightforward "self-executing" process entailed in traditional zoning.

In overall terms, incentive zoning cannot normally finance transit directly. But it can provide "in kind" improvements, important to enhancing the transit station environment. It can also help attract private development to transit locations, thus contributing to increased fare box

revenues and transit finance through other innovative techniques. Considering the planning and administrative skills called for, however, incentive zoning seems likely to find favor mainly in the largest and most sophisticated local governments.

Special District Zoning

As distinct from incentive zoning, special district zoning commonly calls for a master plan of the area in question, prior to detailed pre-regulation of development. A usual procedure is for the master plan to be approved by the city council with such subsequent site-specific plan approvals as may be necessary by the planning commission or an administrator.

The line between incentive zoning and special district zoning is not always clear, and most special zoning districts contain some incentive provisions. But apart from a master plan (the "acid test" of a special zoning district), there are several distinguishing features of this zoning technique, including the following:

- it applies to a specific geographic area which presents special planning problems because of existing uses, historical importance, proximity to major public facilities such as transit, or other factors;
- it seeks to protect and enhance existing uses (in addition to regulating new development) especially in areas threatened by strong redevelopment pressures;
- it entails detailed, pre-regulation of the area's development, as distinct from "wait and see" zoning procedures which rely more on discretionary review of developer proposals; and
- it can embody more mandatory requirements on developers (e.g. provision of public amenities or transit-related improvements specified in the approved public plan for the area), relative to incentive zoning.

In short, this technique typically gives detailed planning treatment to a district's special development problems, prescribes how each parcel of land may be used with great specificity, and calls for a correspondingly greater conformance from private developers than is the case with incentive zoning

alone. (Recall that incentive zoning provisions are usually applicable only at the option of the developer, who can elect to adhere to conventional zoning if he prefers).

Special district zoning has been most widely utilized in New York City, notably in the Greenwich Street Special Development District. There, only about \$60,000 has been contributed thus far to a transit improvement fund, by one developer in return for a density bonus. Experience elsewhere has been limited, possibly because special district zoning requires a degree of detailed planning and physical design expertise beyond the present capabilities of most local governments. And even results from the New York City experiment have been mixed, because of both unfavorable market and financial factors -- in New York City in general and Lower Manhattan in particular, during the early 1970's -- and the difficulties of devising detailed pre-regulation of development.

In overall terms, special district zoning can provide limited direct financing for transit. The technique can also provide indirect financing for transit (e.g. public improvements at private cost) particularly to the extent that the special district includes incentive zoning provisions. The administrative resources required to effectively implement special district zoning are significantly greater than any other technique in this category. Consequently, its scope for transit financing applications seems limited primarily to localities with strong planning capabilities.

Dedications and Exactions

Dedications and exactions involve a mandatory conveyance of land, facilities or money to a public entity for future community use, as a condition for development approval. Though related, the two techniques do have distinguishing features:

- Dedications involve the mandatory provision of land or public facilities such as sewer and water lines, parks, schools (or school sites) and recreational facilities.

- Exaction (termed a development tax in some jurisdictions) involves a mandatory payment of cash (e.g. where public policy so requires, or where a developer is unable or unwilling to provide land or facilities).

Historically, dedications and/or exactions have been employed primarily for suburban subdivisions. Examples include Boulder, Colorado; Loudoun County, Virginia; Petaluma, California; and Ramapo, New York.

In principle, dedications and exactions appear to offer several advantages which are similar to some taxation techniques, notably special benefit assessment. One is to spread the cost of public facilities or services more evenly among beneficiaries of the improvements. Another is to assure provision of improvements while development is proceeding, rather than after it is completed. Also like the special benefit assessment, both dedication and exaction pose legal questions regarding the reasonableness of requirements on a developer (e.g. is the dedication for facilities directly related to his project). Exactions also present other legal issues regarding the status of money payments either as a fee (i.e. are proceeds earmarked for specific uses) or as a tax (i.e. are proceeds treated as general revenues) and if the latter, whether a tax for this purpose is authorized.

In practice, however, dedications and exactions have been employed primarily in suburban areas, and instances where dedications or exactions are specifically earmarked to transit purposes have been few. Consequently, the overall promise of dedications and exactions for transit financing applications in the built-up urban areas would appear limited.

The Official Map

The official map is typically drawn up by local government's planning or zoning agency and is (or should be) consistent with that jurisdiction's comprehensive plan. It usually shows the location of existing and proposed transport arteries, parks and recreational facilities, infrastructure and other major public improvements. The resulting "map" is more than a conceptual plan, since facilities are located on it by physical survey. In

addition to local projects, those of state or regional authorities (e.g. a metropolitan transit entity or state highway commission) are frequently added.

Once the new document has been properly filed (e.g. in the local registrar's office), building permits can no longer be issued in areas designated for future public use. Use of the official map in the U.S. is not widespread, and varies from community to community. But the technique tends to minimize condemnation costs in designated areas by discouraging expensive improvements, which would be considered non-compensable in a condemnation award. Specifically, once lands were designated for a public purpose, regulation would not provide for compensation to property owners for improvements constructed after approval of the official map.

In overall terms, no transit applications of this technique have been reported so there is little basis for judging its transit financing potential. However, the official map would appear to offer some potential for reserving land or easements for needed improvements (e.g. pedestrian walkways and amenities) around transit station stops. Over a longer period, where transit is developed incrementally, the technique could also be employed to reserve right-of-way for future expansions, stations, or even entire transportation corridors.

Taxes, Assessments and Service Charges

Four techniques are covered in this category:

- a dedicated property tax typically levied over a small area local district served by transit, with proceeds specifically earmarked for transportation purposes;
- tax increment financing, which levies no new tax, but reserves increases in property tax revenues beyond a "frozen" base to pay for public investment in a designated project area;
- the special benefit assessment which is levied against property in a district served by transit for the specific purpose of financing public investment there, usually capital improvements; and,

- service charges, similar to a special benefit assessment except that the charge (e.g. transit connector fee) is more apt to be for repetitive or continuous services.

Typically, these techniques rely on the second of four government powers restricting property ownership rights -- the power of taxation -- and hence tend to operate through the established tax and fiscal machinery of general local government. Some, such as service charges, however, can also be structured between a transit entity and adjoining property owners through use of transit access agreements.

These tax and related techniques generally offer the greatest promise for transit finance applications among those covered here. They tend to produce the greatest revenue among the innovative financing tools considered, and many public officials are familiar with their administration. There are some potential stumbling blocks of an administrative, legal and political nature with these techniques, but most can be surmounted if transit or development officials are thoroughly briefed on their use.

Dedicated Property Tax

Of major local government levies, the property tax has been one of the most frequently dedicated for transit purposes. Application of this tool, however, has been largely on a regional basis rather than over small area local districts at a sub-regional level, the primary focus here. Probably the main example of such taxing powers over smaller areas is the Chicago Urban Transportation District, established in 1970 and currently levying property taxes over a 9.5 square mile area in Chicago's downtown to provide funds for the local share of projects it undertakes. The City of Berkeley has also established a dedicated property tax within its boundaries, for purposes of paying for certain construction costs of the BART segment there.

Except in states which specifically restrict the property tax's use, administrative and legal requirements associated with this technique tend to be modest. Since property taxes are levied for general public purposes there is typically no requirement that the taxed property receive services

or benefits in proportion to the tax levy — the case with special benefit assessment, for example. In most areas, however, a major political concern stems from the fact that property taxes today are a highly visible levy (typically entailing a lump sum payment annually, semi-annually or quarterly) with a poor public image and alleged regressivity. Hence, the viability of implementing this technique hinges on the political climate, although local applications at less than regional scale and with nominal rates appear relatively promising (assuming taxes are not already at "confiscatory" levels). Within the past decade, for example, a number of cities (both large and small) have established special taxing districts for downtown areas, commercial strips and historic preservation districts, using this same concept.

In overall terms, once such a tax is established it may be easily managed within the constraints of state and local law. Assuming a well established tax base, it can provide immediate cash flow (e.g. "seed money" for initial planning), at minimum risk and without tying up capital which might otherwise be needed for transit construction.

Tax Increment Financing

Tax increment financing uses the increases in property taxes revenues — projected as a result of public and private investment within a designated project area — to pay for public improvements there. The technique does not lower tax revenues presently collected for other purposes (e.g. for general local government or special purpose districts) nor does it impose any new levies on the area. It does reserve the incremental increase in tax revenues from anticipated new development to pay for public investment to assist that development.

Briefly, the technique works as follows. Once the area is designated, a local tax assessor determines the current tax base and revenues from the area. Then, all future tax revenues beyond this current, or "frozen" base (that is, taxes resulting from growth of the tax base beyond its existing level) are assigned to a transit or development entity. The entity may then apply these revenues to pay directly for public improvements in the area

(on a "pay-as-you-go basis"), or pledge the tax increment for repayment of bonds.

Although tax increments are rarely available in early years, this technique can significantly expand the financing capability of transit or development entities. Tax increment financing is presently authorized or under active consideration in about one-third of the states, and over 200 projects in approximately 32 cities have been so financed in California alone (including BART's Embarcadero Station, the most noteworthy transit application). Tax increment financing does present some administrative difficulties -- notably as a result of local government involvement in land development, and the potential for abuse -- but these can be solved through judicious use of this tool.

In overall terms, the technique can be significant for financing transit, although such applications have been limited to date. A pragmatic consideration is that tax increment financing may also be justified as a means of avoiding some legal restrictions on local borrowing. Specifically, almost all states impose some limits on local government borrowing capacity, but tax allocation bonds (secured by projected tax increments in a project area, not the locality's full faith and credit) may be exempt from such restrictions, depending on state law.

Special Benefit Assessment

The special benefit assessment has long been used to pay for local improvements such as streets, sewers and sidewalks, as well as more recently for downtown malls, parking structures and transit facilities. Utilized mainly by municipalities,^{1/} its application historically has been restricted to areas demonstrably benefited by the improvements, with

^{1/} However, other units of government (e.g. counties, townships, special districts) may also levy special benefit assessments; consequently a transit or development entity could conceivably either levy a special assessment directly or receive such revenues from its general local government.

proceeds dedicated (either directly or through retirement of debt service) to pay the cost of improvements installed.

The legal and economic theory of special assessment requires they be charged against property in proportion to benefits received. Difficulties in determining the amount of such benefits -- in turn the basis for allocating improvement costs between public and private sectors and among affected properties — are among the principal problems limiting wider use of this technique for financing transit over large areas. In addition, the checkered history of special benefit assessment (many so financed projects defaulted on bond payments during the Depression), the absence of tax deductability and other factors have detracted from the popularity of this technique.

In overall terms, however, special benefit assessments can be an important technique for financing local transit facilities and/or improvements in the immediate vicinity. This technique is generally less productive of revenue than a dedicated property tax or tax increment financing, since the special benefit assessment tax base tends to be relatively smaller. On a somewhat more pragmatic basis, special benefit assessments are often justified as a financing technique which avoids some of the legal restrictions on local taxation and borrowing and which may be more acceptable to elected officials and taxpayers than other sources of revenue under certain conditions.

Service Charges

A service charge resembles somewhat the special benefit assessment. Both are related to use of, or benefit from, a public program or improvement. In both an attempt is made to levy the charge or assessment in proportion to this use or benefit. They differ in that a service charge is more apt to be levied for repetitive or continuous services, rather than for "one shot" capital improvements. Though reportedly employed by the London transit entity, service charges have been relatively little used in this country for transit purposes. They have been proposed in several instances, including for the St. Paul DPM. In concept, service charges are comparable to fees paid for a sewer connection, a device which is widely employed in suburban development.

In overall terms, the service charge is neither widely used nor well understood relative to, say, special benefit assessment or tax increment financing. Additionally, its revenue potential appears confined to a levy on those properties which can directly connect to transit. Hence, financing potentials and overall promise of this technique are less than levies discussed above, though there may be scope for application in some station areas surrounded by high density development.

Public Land Acquisition

All techniques in this category involve some degree of public land acquisition by the transit or development entity, whether limited to the property and air rights associated with an approved right-of-way, or extending to "supplemental" acquisition (the above plus more land than is actually required to create the transit improvement). As a great many permutations are possible in this category, the most prominent have been grouped into four techniques for purposes here:

- Lease or sell air rights;
- Lease or sell supplemental property;
- Develop air rights/supplemental property; and
- Participate in property development.

All of the above usually involve the exercise of eminent domain, a third major government power restricting private property rights. Beyond this basic ingredient, however, each technique tends to entail essentially different investment attributes -- as well as administrative, legal or political requirements -- from the other tools in this category.

One basic distinction, for instance, is that lease or sale of air rights does not require supplemental land acquisition. The distinction is significant since supplemental acquisition generally calls for greater legal powers and more human and financial resources than dealing in property and related development rights already acquired as part of a transit development program. Also, key differences exist between a government's dealing in property -- for example, through lease or sale -- and engaging directly in development.

Government already engages in some land acquisition for urban renewal (historically perhaps the most massive local program) and public facilities including transit systems. The arguments advanced in support of more extensive public acquisition activities are numerous, but need to be evaluated on a case-by-case basis. To this end, U.S. experience is extremely limited. Moreover, extensive public land acquisition schemes may involve significant risk, high capital costs, complex administrative problems and/or severe legal constraints. Use of federal (as distinct from state or local) funds for such purposes could present additional issues, such as compliance with the Uniform Relocation Assistance Act of 1970, and appropriate sharing of any proceeds between federal and local governments (e.g. on an 80/20 percent basis).

Lease or Sell Air Rights

Air (including subsurface) rights are typically acquired in the course of right-of-way acquisition. Consequently, putting these resources to productive use need not require substantial new public investment -- an advantage not shared by other techniques in this category. Otherwise stated, lease or sale of air rights does not require significant front-end investment from the entity, typically at a time when available capital resources are required to construct the transit system. Likewise, the administrative, legal and political requirements of using air rights tend to be significantly less than other public land acquisition techniques.

Assuming a transit or development entity can deal in real property, long term leasing of ground or air rights is generally more satisfactory than selling. Relative to sale, advantages of leasing include: 1) the entity retains title and hence overall control of the property, an important long range consideration if the transportation requirements change; 2) the entity can participate in long term appreciation in land values, especially if leases are negotiated to this end (e.g. using a percentage lease, escalator clause or reappraisal clause); and 3) the entity can provide through leasing arrangements several important investment and tax incentives to developers considering an air rights project. A somewhat offsetting factor

is that real estate and financial practitioners in certain areas of the country are less familiar with long term land leasing than sale.

In overall terms, air rights projects can provide both needed improvements of a transit-related nature along with income, especially if eventual development contains significant revenue producing uses. These results can be realized with relatively modest financial and administrative resources, if the transit or development entity plays a limited leasing (or selling) role. The application of this technique, however, is limited to those relatively few air rights projects which are economically feasible, typically high density configurations in desirable locations. In this connection, very few cities are so densely developed that land becomes sufficiently scarce and costly to justify air rights construction.

Lease or Sell Supplemental Property

Unlike the technique above, leasing or selling supplemental property requires acquisition of more land than is actually required for the transit improvement. Consequently, additional public investment is involved. The amount of public investment, of course, depends upon the scope of supplemental acquisition, but typically these capital requirements come at a time when available public resources are needed to construct the transit system.

To acquire supplemental (or excess) property, the transit or development entity must possess statutory authority, and possibly judicial sanction, for this purpose. However, most entities lack sufficient authority and legal precedents from local courts -- much less agency policies and procedures -- to engage directly in supplemental acquisition (or excess condemnation) with the intent of subsequently selling or leasing the surplus.

In overall terms, public acquisition and lease or sale of supplemental property could conceivably provide some income to finance transit, especially if lease or sale terms reflect residual values for eventual development with significant revenue-producing uses. This technique, however, has not been widely used in the U.S., and where applied, the

returns from sales or lease appear not to have greatly exceeded the costs of acquisition and administration. Consequently, risks or present returns may not justify investment, even though financial and administrative requirements are less onerous than if an entity engaged directly in physical development (see below).

Develop Air Rights or Supplemental Property

This technique requires both acquisition of more land than actually necessary for the transit improvements, and substantial new public investment to develop these supplemental (or excess) properties. U.S. experience is extremely limited with this technique, perhaps the most publicized example being the World Trade Center, developed in Lower Manhattan by the Port Authority of New York and New Jersey over the PATH Terminal and three transit lines. Financial data are unavailable on this venture, but informed observers are skeptical as to the investment's soundness, and cite the significant risks created for the Port Authority. The World Trade Center, in short, cannot be considered typical and was not even a case of using excess transit property, save to a limited extent. Most of the complex is on land pre-empted for this purpose from private uses, with resultant loss to New York City of tax revenues.

To develop such property, the transit or development entity must have statutory authority, and possibly judicial sanction, both to acquire supplemental properties and to engage in real estate development directly. Entrepreneurial abilities and specialized expertise are also required to conceive and execute real estate projects. However, this legal authority and the requisite administrative resources to conduct physical development directly do not exist in most transit or development entities in the U.S.

In overall terms, public acquisition and development of supplemental property could conceivably provide both needed public improvements and substantial income, especially if eventual development contains significant revenue-producing uses. This technique has been rarely used by transit entities in the U.S., however, and there appears little reason to believe that returns would greatly exceed the cost of public development in most cases.

Further, achieving a return would require a broad statutory authority, specialized administrative skills and financial resources — notably front-end investment — typically at a time when public monies are needed for transit or development entities in this country. Finally, direct involvement in property development would entail risks associated with comparable real estate activities (e.g. shortfalls in absorption pace or occupancy rates as a result of general economic conditions or local land use markets).

Participate in Property Development

Under this technique, participation can take many forms, from an entity's contribution of land as equity to extension of loans or loan guarantees. Generally, though, "participation" means several lenders or equity partners, including a transit or development entity, that join together, each providing a portion of the project's financing. A key distinguishing feature is that government receives a "piece of the action" in return for its contribution, and shares in the risk should the project fail.

The administrative and legal problems associated with this technique can be complex. At a minimum, the transit or development entity needs to understand how returns are generated through real estate investment (specifically with respect to cash flow, leverage and tax consequences). Also, shrewd and possibly protracted negotiations may be needed with private developers, as well as working familiarity with various development problems that could ensue. More significantly, most state and local governments are not statutorily empowered to "get into the real estate business" in this fashion. Political controversy is also likely to arise from this aspect, as well as from accusations of favoritism to certain developers at public cost.

In overall terms, participation in property development by a public entity is relatively infrequent in the U.S., and seems certain to create significant administrative, legal, and political problems. Moreover, a number of factors are likely to limit the potential return to government through this technique (e.g. the probability that public investment in less than choice projects will produce a low rate of return). Consequently, the overall promise of this technique for transit applications seems small.

Financing Potentials of Innovative Techniques

To dimension the financing potentials for transit from these innovative techniques, of course, requires a careful local determination, taking account of the applicable base, rate and resultant yield as well as relevant institutional factors. Illustratively, however, it appears that perhaps 5 to 15 percent of the capital costs associated with certain transit facilities could be defrayed through a combination of innovative financing techniques under an ambitious, but achievable program. ^{1/} This judgment -- there being little experience to date with extensive use of these techniques in the transit field -- is based primarily on a review of 1) Toronto's long term land leasing program, 2) several recent financial plans (submitted to the federal government by "finalist" communities as part of competition for the DPM demonstration program) and 3) "order of magnitude" calculations contained in Appendix B of this catalog.

Toronto

The TTC (Toronto Transit Commission) is frequently cited among North American transit entities as a forerunner in the application of long term land leasing arrangements on air rights surrounding its subway stations. TTC experience with this technique covers essentially three phases: 1) the initial Yonge Street subway line, initiated in the late 1940's, 2) the remainder of the existing subway system, beginning with the University and Bloor-Danforth lines in the late 1950's and early 1960's and 3) current transit construction, including the Spadina line and the Kennedy Road extensions. Of these three phases, however, only the first has been

^{1/} These magnitudes do not necessarily reflect revenues that might be realized through improvements in the administrative and assessment aspects of the existing property tax or through implementation of a betterment levy on increased real estate values resulting from transit. These measures are analyzed in Chapter 4 of this catalog.

implemented over a sufficient period of time to permit a definitive evaluation of results. ^{1/}

Concerning the initial Yonge Street subway line, key chronological events to the current day include the following:

- 1949 to 1954: acquisition by TTC of 22 city blocks, and start and completion of construction for this initial 4.5 mile segment, extending from Union Station (on the Lake front) to Eglinton Station (then, as now, a major terminus for TTC's suburban bus network). Cost of the total system was \$60 million, including \$3.9 million for land acquisition.
- 1960: start of significant, long term land leasing on air rights, or what TTC refers to as "building rights." The major reason for this six year delay (between 1954, when transit operation began, and 1960 when long term land leasing started) was that the market for air rights development was not "ripe" until the early 1960's, according to TTC staff.
- 1977: 17 of the 22 blocks are leased, producing an annual net return of \$504,340 which accrues to TTC to offset its operating deficit.

TTC officials believe that this experience represents a fair (in the sense of "reasonable for a completed program") example of the transit financing potentials from an ambitious program of supplementary (or "excess") land acquisition and subsequent sale or lease of surplus property.

One reason, they point out, is that though a number of choice parcels were obtained by the TTC, supplemental acquisition was confined to the segments between Bloor and Eglinton. Below Bloor Street, construction followed conventional cut and cover along Yonge Street and supplemental acquisition was not involved. Had the TTC acquired land in these downtown locations, substantially more long term land lease revenues could have been realized -- overstating as a result the revenue yields that could reasonably be expected, except in dense downtown locations with strong development potentials. Another reason is that the properties now leased

1/ This conclusion, and the remainder of the discussion of Toronto's experience draws heavily upon field work in that city in May 1977 and information made available by R. Michael Warren (TTC Chief General Manager) and his staff.

are probably as much as can be accomplished, the balance (or 5 properties) being difficult to market for reasons of poor location, irregular physical configuration and so forth.

In retrospect, a realistic assessment of the Toronto experience also requires a recognition of special historical circumstances surrounding the initial Yonge Street subway during the early 1950's. Technically, land acquisition for transit at that time involved only properties within approved right-of-ways. In fact, however, land acquisition for the initial Yonge Street Subway was more akin to supplemental acquisition, and was represented by TTC staff as drawing right-of-way lines so as to "nick" a number of abutting properties. These were then fully assembled, rather than proceeding through a partial taking.

This ambitious land acquisition program seems unlikely to be replicated today in Toronto, however, for at least two reasons. First, the 1949-1950 acquisition was carried out by a "cash rich" TTC (liquid from several operating surpluses in the immediate post-World War II period), whereas the TTC today operates within the bounds of scarce or limited resources, much in the manner of most U.S. transit systems. Second, the initially liberal land acquisition policies (applicable over the 1949-1954 period) have been replaced as of 1969 by substantially more restrictive procedures, which limit land acquisition to properties specifically needed for the transit improvement.

In addition, a major shift in responsibilities occurred in 1954, when land acquisition responsibilities were moved from the TTC to the newly formed Metro Toronto, the area's regional government, which now also receives any revenues derived from lease or sale of surplus property. ^{1/}

1/ Metropolitan Toronto, formed in 1954, is currently a federation of the City of Toronto and 5 suburban boroughs. Metro Toronto today has broad overview responsibilities, and final decision-making say, for matters of metropolitan transit policy, transportation infrastructure and other types of capital improvements and so forth. The TTC retains responsibility for initiating many proposals in these areas, as well as operating the transit system in a responsible manner.

Hence, whereas long term land leasing revenues associated with the initial Yonge Street segment accrued directly to TTC, subsequent long term land leasing revenues (e.g. those associated with the Bloor-Danforth line) were funneled to Metro Toronto. This shift in responsibility to general local government has also reinforced a public policy in Toronto which places primary emphasis on transit as a tool for the urban economic development, rather than on recovery of land acquisition costs alone. From a general local government perspective, examples of this emphasis on economic development include:

- TTC's business-like behavior and sensitivity to developer problems, while negotiating land sales, leases and/or transit access agreements with the private sector;
- land disposition policies designed to encourage private investment at subway station stops, through reliance on relatively straightforward flat-rate leases over a long term, rather than a percentage lease, frequent reappraisal or related provisions; 1/ and
- current plans for light rail extensions to suburban areas, so as to stimulate new, higher density development there (e.g. the Scarborough Town Centre, which is to become a major regional focal point for commercial, administrative, cultural, entertainment and institutional activities).

Seen from this general local government standpoint, the return on public investment in transit in Toronto is regarded primarily in terms of the greater economic activity, property taxes and the like that are generated at transit station stops, a return which is usually far more substantial than lease or sale revenues alone.

In terms of the latter per se, however, the annual return associated with long term leasing along the initial subway line is currently \$504,340, as shown in Exhibit 2.2, page following. TTC officials evaluate their return on investment by comparing this annual flow of cash with the initial cost of

1/ Another important aspect, significant in securing private financing for air rights development, is the usual TTC practice of subordinating its interest to a senior mortgage on the property. These practices are detailed further in a forthcoming study by ULI-The Urban Land Institute and Gladstone Associates on prominent joint development projects and promising "best practices" in the U.S. and Canada.

Exhibit 2.2

ANNUAL REVENUES TO TTC
FROM LONG TERM LAND LEASES
YONGE SUBWAY-FRONT TO EGLINTON
TORONTO, 1976

	<u>Area</u>	<u>Blocks</u>	<u>Annual Rent</u> ^{1/}
1.	Rosehill to Jackes	1 block	\$ 23,112.25
2.	Davisville Yard	1 block	\$ 84,888.00
3.	Summerhill to Jackes	2 blocks	\$ 33,300.00
4.	Wellesley to Dundonald	1 block	\$ 27,600.00
5.	Church to Asquith	1 block	\$ 30,000.00
6.	Chaplin to Berwick	6 blocks	\$ 62,500.00
7.	Rosehill to Pleasant	1 block	\$ 10,000.00
8.	Shaftesbury to Summerhill	1 block	\$ 33,660.00
9.	Berwick to Eglinton	1 block	\$ 44,650.00
		Phase II	\$120,000.00
		Phase III	\$ 1.00
		Corner	\$ 5,178.00
		Boiler	\$ 2,250.00
		Driveway	\$ 1,200.00
10.	Bloor to Hayden	1 block	\$ 50,000.00
11.	Yonge-Bloor Station	1 block	\$ 6,000.00
	Total	17 blocks	\$504,339.25

^{1/} As of September 22, 1976 but essentially accurate as of mid-1977; net of taxes and TTC administrative expenses.

Source: Toronto Transit Commission.

land acquisition (or \$3,944,000 in this case) to arrive at a return of about 13 percent ($\$504,300 - \$3,944,000 = 12.78\%$). This concept could be considered a "simple return," since it takes no account of the timing of costs and revenues, a matter returned to later in this section. In general, however, TTC officials believe, based on Toronto's experience to date, that an ambitious long term land leasing program can completely recover land acquisition costs over a reasonable period of time. In their experience, land acquisition costs typically amount to 9 to 12 percent of total capital costs for the transit system.

A "simple return" analysis as discussed above, however, does have a major shortcoming, which is to ignore the future value of money. Otherwise stated, a dollar received tomorrow is worth less than a dollar received today. Accordingly, a more accurate picture can be obtained through a present value analysis, which spreads out costs and revenues on a year-by-year basis. This type of analysis is particularly appropriate for the TTC's long term land leasing program associated with the initial Yonge Street subway segment, since revenues did not begin flowing until 1961, or more than a decade after costs were incurred for land acquisition.

Based on a detailed schedule of these revenues (as provided by TTC) and an assumed discount rate (7 percent), results are shown on the pages following. Using this present value approach, revenues from long term land leasing would cover about 77 percent of land acquisition costs, or about 5 percent of total capital costs associated with the initial Yonge Street transit line. (See Exhibits 2.3 and 2.4, pages following).

SIGNIFICANCE OF REVENUES
FROM LONG TERM LAND LEASES
RELATIVE TO COSTS FOR INITIAL YONGE STREET SEGMENT
TORONTO, 1977
 (Present Value As of 1950)

A. Capital Cost in 1950 ^{1/}	\$60,000,000
B. Land Acquisition Cost	\$ 3,900,000
C. Present Value of Land Leases ^{2/}	\$ 3,000,000
D. Ratio of Present Value of Land Payments to Capital Cost (C-A)	5%

Note: Another analytical approach, more appropriate for evaluating supplemental acquisition "at the margin" would distinguish between property acquired for transit tracks and stations, and property acquired in excess of these needs. The return on this latter component (e.g. through lease or sale revenues) could then be calculated to establish the costs and benefits for government from a supplemental acquisition program.

1/ Capital extended over a five-year period between 1949 and 1954 excluding interest on debentures. Assumes all capital costs were incurred in 1950.

2/ See Exhibit 2.4 for details. Refers to annual net return from long term land leases along initial Yonge Street subway, a right-of-way of approximately 4.5 miles. Long term land leases are generally for a first term of 33 years at a fixed rental on a net basis, with the lessee paying taxes and all other charges.

Source: Toronto Transit Commission; Gladstone Associates.

REVENUES FROM LAND LEASES
INITIAL YONGE STREET SEGMENT
1950-1980

<u>Year</u>	<u>Revenues As of Year Received</u>	<u>Present Value Factor at 7 percent 1/</u>	<u>Present Value As of 1950</u>
1950	---	---	---
1951	---	.9345	---
1952	---	.8734	---
1953	---	.8162	---
1954	\$ 10,000	.7628	\$ 7,628
1955	\$ 10,000	.7129	\$ 7,129
1956	\$ 10,000	.6663	\$ 6,663
1957	\$ 10,000	.6227	\$ 6,227
1958	\$ 10,000	.5820	\$ 5,820
1959	\$ 10,000	.5439	\$ 5,439
1960	\$ 200,000	.5083	\$ 101,660
1961	\$ 200,000	.4750	\$ 95,009
1962	\$ 200,000	.4440	\$ 88,793
1963	\$ 200,000	.4149	\$ 82,984
1964	\$ 200,000	.3878	\$ 77,555
1965	\$ 350,000	.3624	\$ 126,840
1966	\$ 350,000	.3387	\$ 118,542
1967	\$ 350,000	.3165	\$ 110,786
1968	\$ 350,000	.2958	\$ 103,539
1969	\$ 350,000	.2765	\$ 96,765
1970	\$ 500,000	.2584	\$ 129,200
1971	\$ 500,000	.2415	\$ 120,747
1972	\$ 500,000	.2257	\$ 112,848
1973	\$ 500,000	.2109	\$ 105,465
1974	\$ 500,000	.1971	\$ 98,566
1975	\$ 500,000	.1842	\$ 92,117
1976	\$ 500,000	.1721	\$ 86,091
1977	\$ 500,000	.1609	\$ 80,459
1978	\$ 500,000	.1504	\$ 75,195
1979	\$ 500,000	.1405	\$ 70,276
1980	\$ 500,000	.1313	\$ 65,678
Past 1980	\$ 7,143,000 ^{2/}	.1313	\$ 937,875
Total			\$ 3,015,356

1/ Revenues discounted at 7 percent, a reasonable return on investment over the 1960-1070 period, according to TTC officials. As a general rule, an appropriate discount rate would correspond to the long term borrowing rate for the government agency in question.

2/ Annual income stream of \$500,000, capitalized at 7 percent ($\$500,000 \div .07 = \$7,143,000$). This calculation probably understates present value of post 1980 revenues for two reasons. First, a lower capitalization rate (resulting in higher revenues) may be appropriate, in view of the high certainty of realizing lease income. Second, this income stream does not reflect ultimate increases in appraised values and resultant growth in land lease payments, realized through re-appraisal every 33 years.

Source: Toronto Transit Commission; Gladstone Associates.

St. Paul and Houston

Among the four cities selected in 1976 for funding under UMTA's DPM (downtown people mover) demonstration program, both St. Paul and Houston gave careful attention to joint development opportunities in their proposals and contemplate use of innovative techniques to pay for a portion of system costs. The indicated financing potentials of these techniques are summarized on the exhibits following, based on the present value type of analysis employed to evaluate the Toronto experience. While findings from this analysis are necessarily less conclusive than for Toronto (where a completed program could be evaluated) the results do tend to fall within the 5 to 15 percent range reported above.

Packaging Financing Techniques

Seen from the standpoint of a transit entity, "packaging" means making a financial plan and working with other levels of government (mainly state and federal) to maximize eligibility for grants, loans and other forms of financial assistance. Packaging is central to sound public finance practice and usually requires considerable skill, in order to best exploit a diversity of financing techniques -- both individually and in combination, particularly in the face of applicable tax and debt restrictions. A satisfactory treatment of this subject is beyond the scope of this catalog, but several illustrations of packaging are set forth below to suggest its significance.

Type of Financial Requirements

One aspect of packaging is simply to match appropriate revenue sources with the type of financial requirements. Packaging needs to produce sources of revenue which will equal financial requirements for a project. The suitability of innovative techniques will depend on large part on their specific financing potentials. However, the estimates set forth earlier in this Chapter suggest that innovative financing -- while previously seen as offering considerable promise -- cannot be expected to provide a major source of funds for transit in most communities. They can be used to

SIGNIFICANCE OF REVENUES FROM
INNOVATIVE FINANCING TECHNIQUES
RELATIVE TO COSTS FOR
ST. PAUL PROPOSED DPM

(Millions of Dollars, Present Value as of 1980)

A. Present Value of Costs (DPM Capital Cost)	<u>1/</u>	\$56.0
B. Present Value of Revenues (from Innovative Financing Techniques)		
Connector Fees <u>2/</u>		\$ 2.2
Special Benefit Assessment <u>3/</u>		<u>\$ 2.3</u>
Subtotal <u>4/</u>		\$ 4.5
C. Ratio of Revenues to Costs (B÷A)		8.0%

Note: Innovative financing techniques for St. Paul's proposed DPM would rely upon methods in the taxes assessments and charges category, as shown above.

- 1/ Assumes for simplicity of analysis that all expenditures occur at beginning of first year (1980) of DPM development.
- 2/ A one time payment by property owners directly connecting to DPM. See present value calculation, Exhibit 2.6.
- 3/ Special assessments on apartments, office buildings, hotels, retail outlets, and restaurants in areas served by DPM. See present value calculation, Exhibit 2.7
- 4/ Excludes revenues attributed in St. Paul proposal to lease payments from land owned by Housing and Redevelopment Authority, since land was acquired substantially in advance of DPM planning and is not included as part of transit system development costs.

Source: St. Paul DPM Proposal; Gladstone Associates.

PRESENT VALUE CALCULATION
REVENUE FROM CONNECTOR FEES
ST. PAUL DPM

<u>Year</u>	<u>Revenues</u> ^{1/}	<u>Present Value Factor @ 7%</u> ^{2/}	<u>Present Value As of 1980</u>
1	\$2,400,000	.9346	\$2,243,400

1/ Assumes four stations are located on privately owned land, with property owners paying lump sum fee of \$600,000 for connection to DPM in Year 1. (\$600,000 x 4 = \$2,400,000). Connector fees are set as a rate equivalent to recover the capital cost of individual station construction. The proposal, however, does not include an analysis of "ability to pay" on the part of these property owners.

2/ Assumes discount rate of 7 percent.

Source: St. Paul DPM Proposal; Gladstone Associates.

PRESENT VALUE CALCULATION
REVENUE FROM SPECIAL BENEFIT ASSESSMENT
ST. PAUL DPM

<u>Year</u>	<u>Revenues</u> ^{1/}	<u>Present Value Factor @ 7% _{2/}</u>	<u>Present Value As of 1980</u>
1	--	.9346	--
2	--	.8734	--
3	--	.8163	--
4	--	.7629	--
5	--	.7130	--
6	\$ 350,000	.6663	\$ 233,205
7	\$ 350,000	.6227	\$ 217,949
8	\$ 350,000	.5820	\$ 203,690
9	\$ 350,000	.5439	\$ 190,365
10	\$ 350,000	.5083	\$ 177,910
11	\$ 350,000	.4751	\$ 166,272
12	\$ 350,000	.4440	\$ 155,394
13	\$ 350,000	.4150	\$ 145,229
14	\$ 350,000	.3878	\$ 135,278
15	\$ 350,000	.3624	\$ 126,848
16	\$ 350,000	.3387	\$ 118,550
17	\$ 350,000	.3166	\$ 110,794
18	\$ 350,000	.2959	\$ 103,546
19	\$ 350,000	.2765	\$ 96,775
20	\$ 350,000	.2584	\$ 90,440
	<u>\$5,600,000</u>		<u>\$2,272,695</u>

1/ Assumes an assessment rate of 10 percent of the lease rate (land is leased from St. Paul Housing and Redevelopment Authority), beginning after year 5 of system operation. Revenues are expressed in constant dollars to factor out inflation.

2/ Assumes discount rate of 7 percent.

Source: St. Paul DPM Proposal; Gladstone Associates.

Exhibit 2.8

SIGNIFICANCE OF REVENUES
FROM INNOVATIVE FINANCING TECHNIQUES
RELATIVE TO COSTS FOR HOUSTON PROPOSED DPM
 (Millions of Dollars, Present Value as of 1976)

A. Present Value of Costs (DPM Capital Costs)	\$40.0
B. Present Value of Revenues from Innovative Financing Techniques	
10% Equity Participation at North Terminal Site ^{1/}	\$ 2.8
Land Lease at South Terminal Site ^{2/}	\$ 4.3
Subtotal ^{3/}	\$ 7.1
C. Ratio of Revenues to Costs (B÷A)	17.8%

Note: Innovative techniques for Houston's proposed DPM would rely upon methods in the public land acquisition category, as shown above.

- 1/ The proposal suggests a 10 percent equity participation, the option portrayed above, with the city's contribution apparently in land at a cost of \$1.9 million. It is unclear from the proposal whether the city already owns this site, or whether additional city contributions will be required to achieve a 10 percent equity position. If additional costs were incurred (or imputed, in the case of existing city ownership) the ratio of revenues to costs would be reduced. Another option, not shown in this exhibit, would involve a 50 percent equity participation. Besides the higher exposure and risk, this alternative would require a \$14 million investment, according to the proposal.
- 2/ Lease rate set at 9 percent of site cost with credit for developer provision of terminal station structure. Land would be acquired for \$2.5 million under another UMTA grant and was not included in DPM capital costs. If land acquisition outlays were added to DPM capital costs, the total would be \$42.5 million, with a resulting reduction in the ratio of revenues to costs.
- 3/ At 7 percent discount rate, as used in Houston DPM Proposal.

Source: Houston DPM Proposal; Gladstone Associates.

pay for selected portions of a system, in combination with other sources of funds.

Seen from a related perspective, innovative financing techniques appear particularly appropriate to pay for more localized transit improvements since they both rely on private investment in the vicinity of transit facilities and permit some shifting of transit costs directly to the private sector beneficiaries there, a solution generally regarded as equitable. Such "local improvements" can have both public and private attributes. As noted in one source:

"Local improvements, such as streets, sewers, drainage facilities, and sidewalks, occupy the border line that separates the public and private sectors of the economy. They are private in the sense that they may be used primarily in connection with the utilization of certain parcels of land. The existence of improvements may greatly increase the value of privately owned land and is often an important factor in transforming farm land woth hundreds of dollars per acre into urban land worth thousands or even hundreds of thousands of dollar per acre.

At the same time, local improvements have important characteristics of publicness. Ofthen they are utilized by the general public in ways which have no relation to specific parcels of land. The existence of particular improvements may influence the development of the entire urban area and thus affect the general public in many ways. Also, they are public in the sense that full benefit from them can be obtained only if the various improvements are developed as part of a coordinated system. This usually requires the involvement of public authority." 1/

These same attributes may make cost sharing between public and private sectors around station stops more appropriate than for other types of transit facilities.

Timing of Financial Requirements

Timing considerations are particularly significant for large-scale transit projects, where land acquisition and construction costs are heavily

1/ Glenn W. Fisher, Financing Loan Improvements by Special Assessment (Municipal Finance Officers Association: 1974), p.5.

concentrated in early years, and the ensuing gestation period prior to operation may last upward of a decade. Where government borrowing is employed, bond maturities (principal payment) may sometimes be deferred, but interest cannot, with the result that delayed cash flows can become a significant liability, and an insurmountable obstacle to bond sales in most cases.

In this connection, it is important to recognize that the timing of cash flows from some innovative techniques may not lend itself to paying for capital costs associated with an initial transit segment. For instance:

- In some cases (most public land acquisition techniques), innovative techniques "complete with transit" by requiring additional public investment at a time when available monies are needed to construct the system.
- In others (e.g. tax increment financing), time -- and eventual development -- is required before revenues for transit can be realized, typically a matter of many years.

Sometimes, packaging can provide for debt financing to alleviate these timing problems.

As another instance, financing techniques could be packaged over time so as to respond to changing availability of techniques and/or financial requirements. For example, capital grants in combination with existing local revenue sources might be used to pay for a transit system's initial segment, with the plan that revenues from air rights leasing, tax increment financing or similar innovative techniques could support second stage construction. Otherwise stated: it may not be possible to borrow against eventual revenues from air rights leasing or speculative values (e.g. tax increments from anticipated development) for purposes of financing the first segment; but it may be possible though selective grant monies and "seed" investment from various levels of government to open up a channel of funds that could be used for a second segment. To generalize, large districts with a well developed tax base tend to be preferable for financing transit in early years, while local districts and associated techniques can often be used to pay for later capital outlays or operating subsidy needs.

Combining Financing Techniques

One case concerns the possibility of packaging financing technique so as to concentrate (and desirably accelerate) public investment in an area served by transit. For example, in the past few years, tax increment financing (specifically, tax allocation bonding) has been combined with lease revenue bonds for the construction of some buildings, such as libraries, schools, or parking facilities. Under this arrangement, lease revenue bonds are sold by a public development entity, and are guaranteed by long term lease agreements. Illustratively, lease revenue bonds used to finance a parking garage would be repaid through lease revenues which were received from either a public or a private operator of the parking facility. Typically, this permits initial public investment in an area before awaiting for eventual private development and the tax increments that may materialize. (An illustration of this concept is contained in Exhibit 2.10, page following).

Still another illustration of the approach involves the packaging of financing techniques so as to reduce borrowing costs (and/or provide backup security to make borrowing possible to begin with). For instance, under tax increment financing, tax allocation bonds can be secured by the projected increase in tax revenues from a designated area (not the locality's full faith and credit, the case with general obligation bonds). In order to make tax allocation bonds more attractive to investors, some cities have made provision to levy special benefit assessments on the area, should the eventual development and expected tax increment not materialize. (These provisions are at the option of a locality and typically vary depending on state enabling legislation).

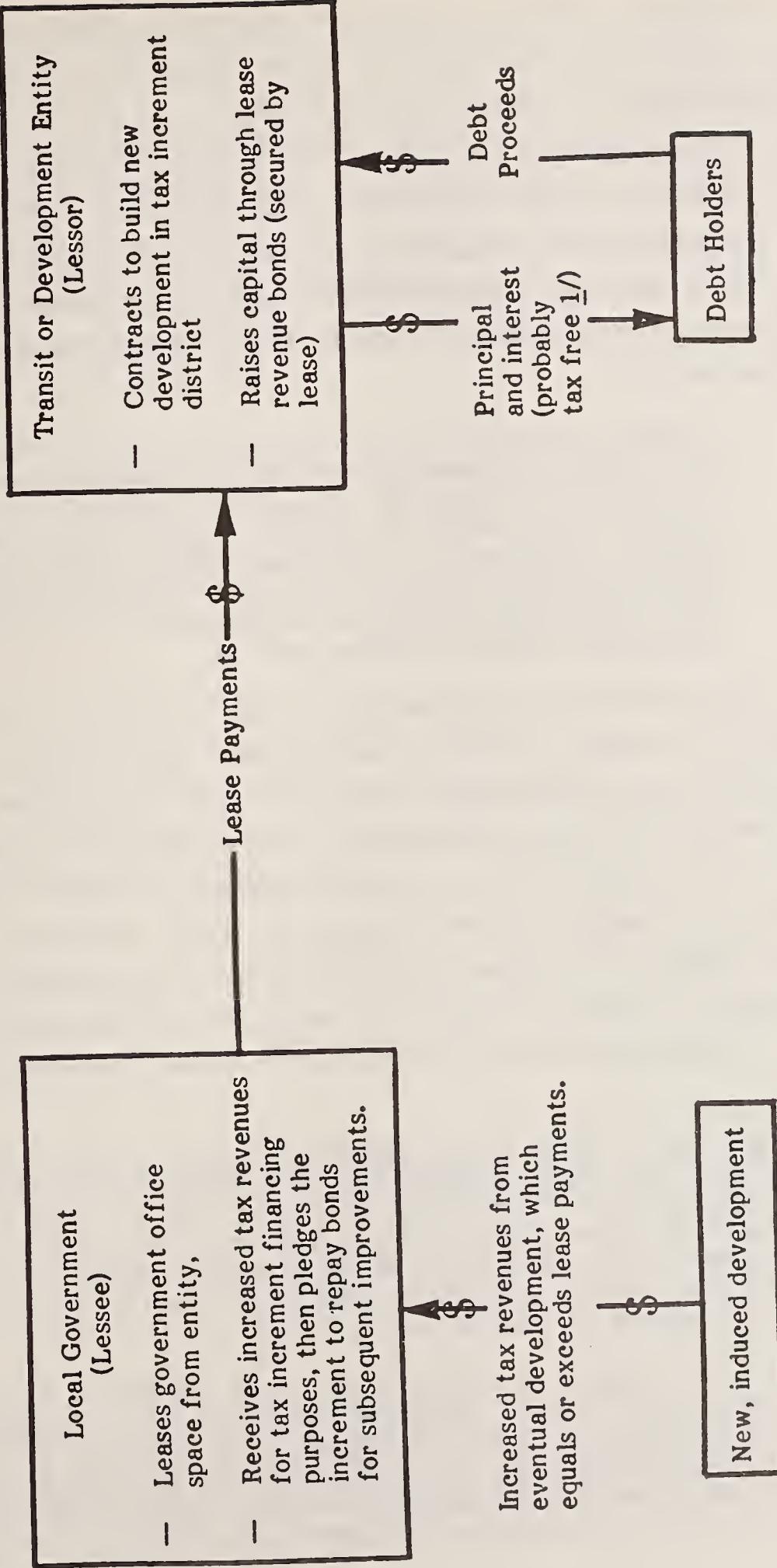
The Literature on Transit Finance

While government implementation of regulations and controls in the public interest goes far back in history, the provision of certain types of public facilities and services is a relatively recent activity. Less than three decades ago, public transportation in many built-up areas of the U.S. was still provided on an individual contract basis.

Exhibit 2.10

COMBINING TAX INCREMENT FINANCING
AND LEASE REVENUE BONDS:

AN ILLUSTRATION



1/ There exists considerable law and administrative regulation with respect to the types of project eligible for tax free financing, and the specific project selected would need to be considered in light of these determinations.

Source: Gladstone Associates.

Gradually, however, long-range planning for capital projects — including the way these facilities are financed — and the administration of municipal debt have become major responsibilities of local government in contemporary society. The acute fiscal crises of several large urban centers lately — notably New York City — have highlighted this role.

Consequently, it is surprising that so little literature is readily available on local government finance in general and transit finance in particular. As one student of public finance and administration has observed recently:

"... with few exceptions the subjects of capital facilities planning and public debt management have been relegated to a relatively few pages in a concluding chapter of most standard works on public finance. While libraries are complete with books on capital budgeting in the private sector, only the more astute student of local government can find the limited monographs on the subject as it relates to the responsibilities of government." ^{1/}

Few facilities are so important to local government from a financing standpoint as transit. Typically, fixed guideway transit systems are the single largest capital improvement even implemented by government in any given metropolis. Annual operating costs — beyond that portion covered by fares — can turn into the tens or even hundreds of millions of dollars. While transit financing has been discussed in several major works, little definitive guidance is available (e.g. in the form of a basic manual) on how to prepare and execute a financial plan for transit from the perspective of state and local government practitioners. ^{2/} Indeed, this oversimplified

1/ Alan Walter Steiss, Local Government Finance; Capital Facilities Planning and Debt Administration (Lexington Books: 1975) p.6. Footnotes to this recent volume provide a good sampling of the general literature now published. In addition, a number of specialized documents have been prepared by professional organizations (e.g. the Municipal Finance Officers Association) and bond houses, but little with a bearing on financing transit systems.

2/ True, there has been treatment of transit financing in some major works, such as Lyle C. Fitch and Associates, Urban Transportation and Public Policy. (Chandler Publishing Co.; 1964) and J.R. Meyer, J.F. Kain and M. Wohl, The Urban Transportation Problem (Harvard University Press: 1965), but neither sought to set forth guidelines for state and local government policy with respect to transit finance.

formulation is its own comment on the current state-of-the-art, since there are a variety of distinctly different transit financing problems (e.g. financing for new, fixed guideway systems, for operating deficits of existing transit systems, or for service to the "transportation disadvantaged"), each requiring different solutions. The literature, such as it exists, is limited to a small number of financing problems (primarily how to pay for new, fixed guideway systems), localized in character (area-specific case studies) and largely confined to works published in the last decade (see Feature Box, page following).

KEY TRANSIT FINANCE LITERATURE

Administration and Management Research Association and the Office of Midtown Planning and Development, Office of the Mayor, City of New York. Transit Station Area Joint Development: Strategies for Implementation, Executive Summary and Final Report (prepared for the U.S. Department of Transportation) 1976. The document focuses primarily on joint development and value capture, and secondarily on transit finance. It groups "joint development mechanisms" into four categories: (1) regulatory (special district zoning, official map, dedication and execution), (2) public land acquisition (purchase of excess property, condemnation), (3) tax (property tax, land value tax, increment tax), and (4) public assumption of risk (tax exemptions, loans and guarantees, equity participation). Analyzes the impact of transit systems on property values, techniques for utilization, alternative institutional policies and organization forms, and the federal role, all of which could have a bearing on transit finance.

Bay Area Council. Financial Bay Areas Transit: Policy Study and Recommendations. San Francisco, 1975. A policy study and public opinion survey in three volumes. Voter familiarity with the existing funding sources, awareness of the financial difficulties and attitudes affecting the likelihood of obtaining additional financial support are given the most attention. Recommendations based on the findings and issues warranting further study appear in the Summary volume.

LeBlanc and Company. Revenue Sources for Transit Support (prepared by the Transportation Finance Task Force, Metropolitan Transit Commission). 1975. A review of transit financial requirements and potential financial resources over the next ten years (1976-1985), with special reference to the San Francisco Bay area. Potential local revenue services include: regional and local support for public transportation, federal and state transportation support, property tax, benefit assessment districts, sales tax, income tax, fuel taxes, vehicle charges and excise taxes.

Arthur D. Little, Inc. Financing Public Transportation (prepared for the U.S. Department of Transportation). 1970. An early overview of current patterns of urban transportation financing, transit finance principles and problems, and financing options in federal, state and local governments, including various value capture techniques.

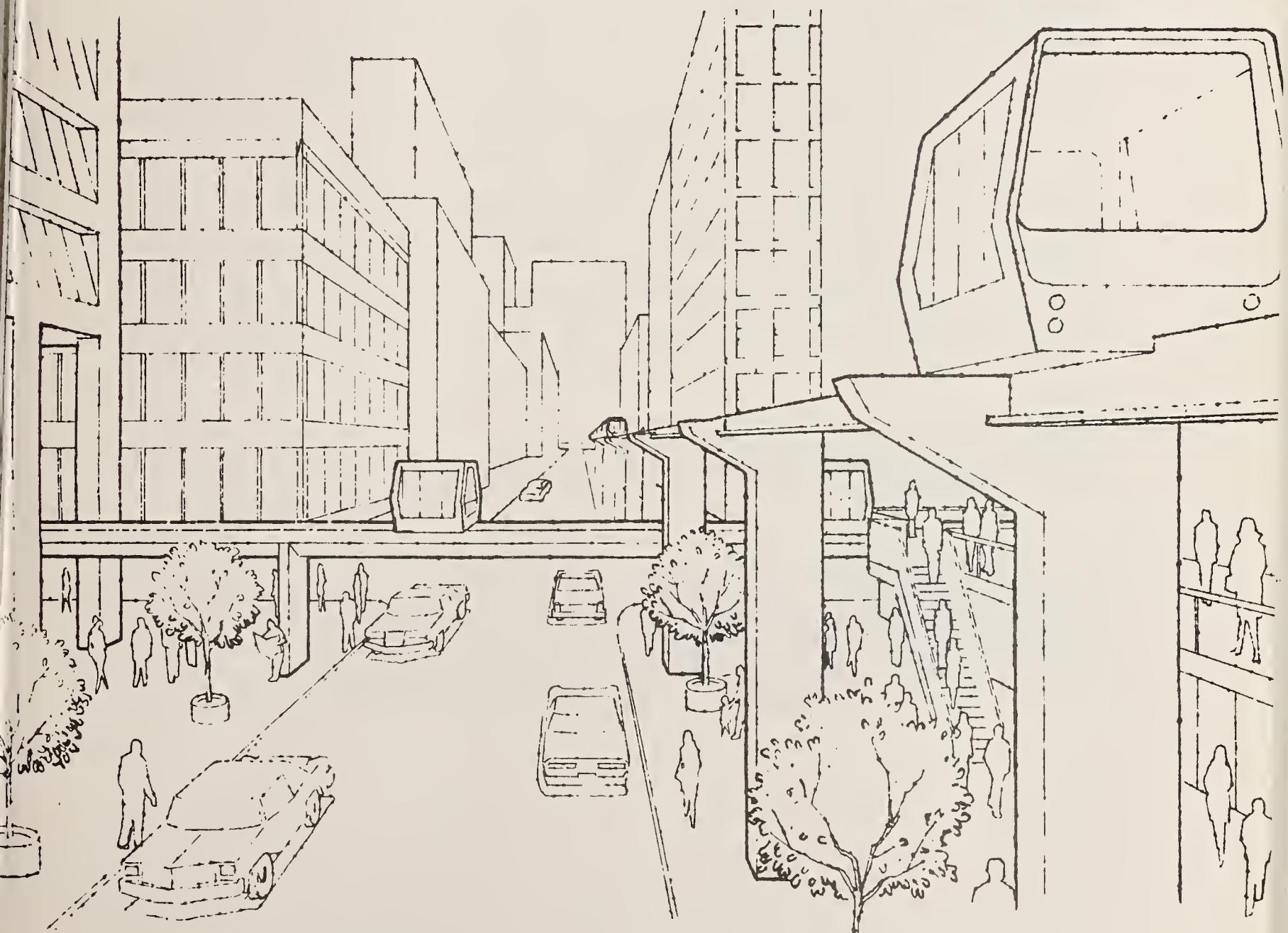
Transportation Research Board. Urban Transportation Finance (Transportation Research Record #589) (sponsored by the Transportation Systems Planning and Administrative Group of the Transportation Research Board). National Academy of Science: Washington, D.C. 1976. A varied collection of essays on economic and financial aspects of supporting urban mass transportation systems. Covers the redistributive effects of public transit, methodology in transportation planning, strategies of state-level support, alternative subsidy techniques, and procedures in financial analysis of transit operating assistance grant requests.

U.S. Department of Transportation. A Study of Urban Mass Transportation Needs and Financing (report of the Secretary). July, 1974. A review of transit financing requirements and possible sources of funds, including "state and local funding mechanisms." The historical framework and evolution of transit finance is provided. Transit fare structure and revenue are explained and an analysis of state local funding mechanisms is given.

Wohl, Martin. Toward Better Public Transport Financing, Pricing and Investment Decisions. Washington, D.C.: Urban Institute, 1970. A brief essay clarifying arguments for various investment, pricing and subsidy criteria. Points out some cost-benefit analysis problems and notes some differences between financial and economic efficiency considerations. Also presents several highway and transit system examples.

Chapter 3:

Joint Development



1977-03-01



JOINT DEVELOPMENT ^{1/}

Joint development refers to the planning and execution of real estate projects and transit facilities in or near transport corridors and station areas. From an economic standpoint, the combined benefits from such complementary capital improvements can be greater than were they accomplished separately. From an organizational standpoint, since transportation is generally a government responsibility and land development primarily a private function, joint development often requires close coordination (and in some cases a "partnership") between both sectors. The result can be an improved economic return on investment and an enhanced environmental relationship between the transportation component and its adjacent land uses. ^{2/}

Combining multiple uses and facilities into a single project is already familiar to practitioners in the real estate field. In multi-use projects, for example, developers deliberately plan and manage a mutually supporting mix of uses and activities so that economic "spillovers" reinforce each other on the same site. Also, the potential of integrating transportation and land development was pioneered in several large-scale projects since the early decades of this century, as will be documented later in this chapter. During the past decade, though, interest in joint development around transit stations has been increasing, notably among private developers, federal, state and local transportation planners, and professionals from a variety of disciplines.

- 1/ Joint development and value capture are sometimes linked in the literature on transit. The two terms are not synonymous, however, and accordingly are treated separately here.
- 2/ As distinct from this definition as a process, joint development can also be employed with reference to a physical product (e.g. a subway station topped by a 26 story office tower). A source of confusion in some of the literature is that joint development is used interchangeably to refer to both process and product; accordingly, the present text will use the term "joint development project" to designate the physical result of this process.

On the surface, joint development seems deceptively simple. However, it can be a complicated matter involving fundamental issues of property rights, the exercise of public power over private property, the interplay of market and financial factors, our basic system of land development, jurisdictional issues among public agencies, and central public policy considerations of equity and fair play. These complications are intensified where public agencies play a major role in joint development since such roles are relatively new and experience in the process is limited, particularly in the U.S.

The following sections of this chapter serve to explore basic concepts, summarize briefly the existing experience with joint development, identify possible opportunities in terms of benefits available to the public, and constraints in terms of financial, legal and related barriers in the joint development process. It also offers profiles of those joint development projects that have been important historically as well as significant projects presently in existence.

Types of Joint Development Projects

The "bricks and mortar" manifestations of joint development are many, from public facilities (schools, fire stations, parks) sharing transportation rights-of-way, to sizeable commercial ventures (offices, shops or housing) constructed in or around transit station areas. For purposes here, the latter type of joint development -- or what might be called "significant projects" -- is of primary interest. Such projects comprise an important transit improvement (e.g. a subway stop) and a sizeable land development component involving revenue producing uses (e.g. retail, office, residential or hotel/motel facilities, illustratively on the order of 100,000 gross sq.ft. or more.) These uses, which typically require substantial private resources to develop, are revenue-producing in the sense of amortizing costs over time and producing a reasonable return on investment. Private investment in developing such revenue-producing uses, in turn, is generally required to realize financing

potentials of the innovative techniques reviewed in this catalog. ^{1/}

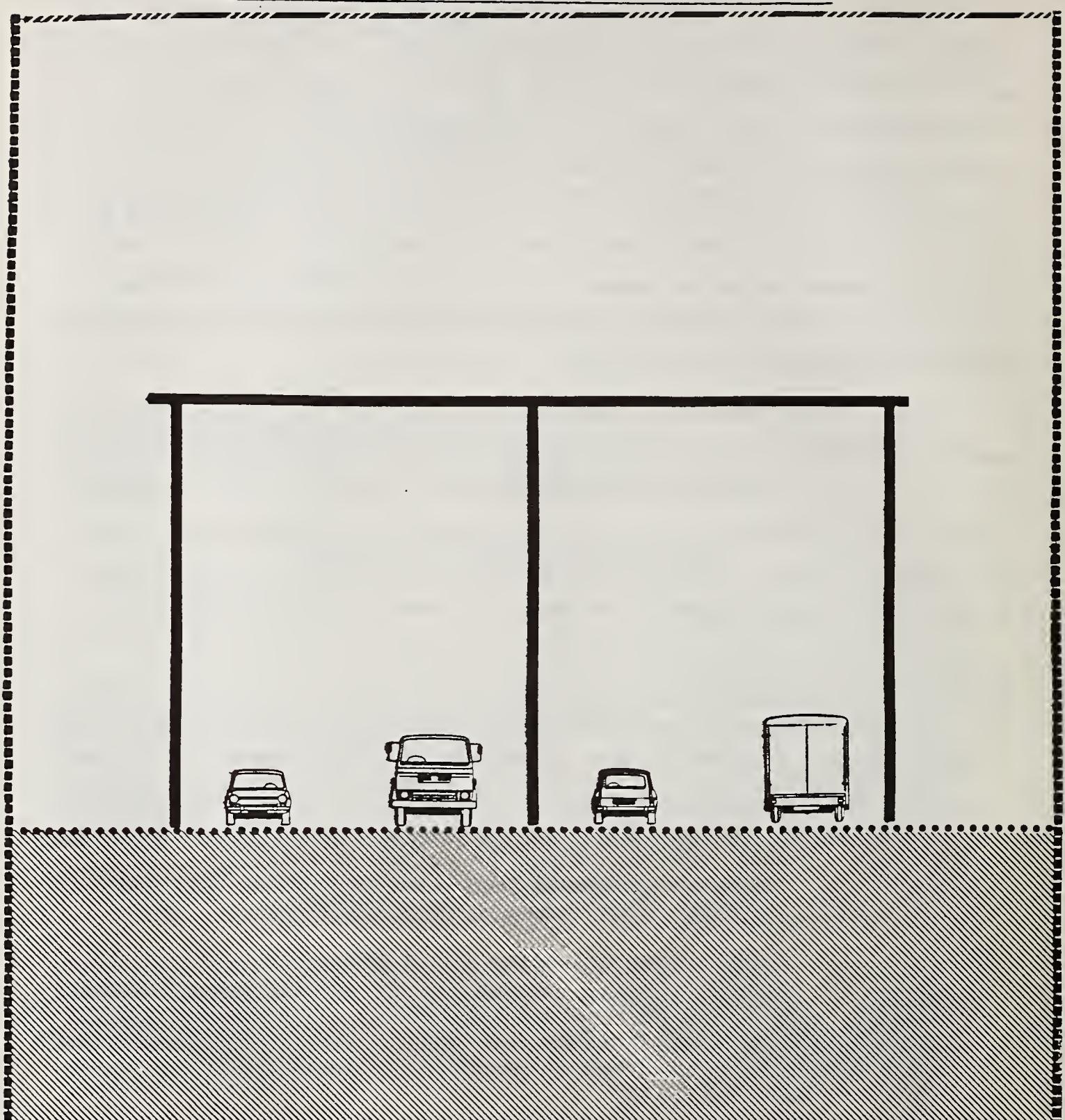
Among significant projects, a first type, air space or air rights development, consists of commercial ventures (possibly including public facilities) located above and/or below a transport artery gradeline, within the approved right-of-way. ^{2/} ("Commercial" here refers broadly to revenue producing uses, not just business-related occupancies.) Classic examples are the Pan Am Building over New York Central's right-of-way in Manhattan, and the Prudential Center (including the War Memorial Auditorium, a public facility) over the Massachusetts Turnpike in Boston. (Exhibit 2.1 illustrates this concept.) In this case, public involvement entails at least the lease or sale of air rights and may extend further into planning, financing and/or constructing the project.

A second type, which might be termed adjacent joint development, concerns sizeable commercial projects (again, possibly including public facilities) which, while not an integral part of the transport facility, are related to it in a significant physical or functional sense. A case in point concerns Westmount Square, a mixed use project in Montreal which is directly connected to that city's western-most Metro stop by a below grade, block-length concourse, paid for and installed by

^{1/} By way of contrast, many joint development projects do not involve substantial private investment in revenue producing uses, but merely the multiple use of a transportation right-of-way or slightly larger area. Private projects in this category are parking lots adjacent to transport arteries, and public projects include public parks or recreational facilities along a highway or transit line. This type of joint development is probably the most common, although a current inventory of such projects is not available; it is of less interest here because capital investment is relatively small, and does not normally encompass significant revenue-producing land uses.

^{2/} The terms "air space" and "air rights" are often used synonymously in the literature. While the first is a physical concept, and the second is a legal concept, the terms are interchangeable for all practical purposes. However, since air rights is the more common term we have elected to use it here. As noted in the text and illustrated in Exhibit 2.1, air rights include above-grade and sub-surface development.

The above definition generally squares with significant literature on the subject and Department of Transportation issues. For details see National Cooperative Highway Research Program report #142, Valuation of Air Space (prepared by Daniel, Mann and Mendenhall for Highway Research Board, 1973).

ILLUSTRATION OF AIR RIGHTSABOVE AND BELOW TRANSPORTATION RIGHT-OF-WAY

Key:

Local Height Limit

 Air rights above grade
(developable)

Building Platform

Air rights above grade
(non-developable)Highway right-of-way,
at gradeAir rights, below grade
also referred to as sub-
surface rights

Note: Illustration above shows at-grade highway and air rights on building platform; above- or below-grade transit guideway could also be conceived with air rights above and/or below the transit improvement.

Source: Gladstone Associates

the project's private developer. Public involvement in this type of joint development may be extensive (e.g. lease or sale of supplemental property) or nominal (e.g. negotiation of transit access agreements), depending on the situation.

Still another type, which could be called area joint development, consists of commercial ventures and other facilities -- commonly in the form of a planned urban center -- over an even larger "impact area" around the transport improvement. By virtue of their complexity and very large scale (e.g. over 1 million sq.ft. of gross building area), projects in this third category tend to be planned in coordination with the transport facility and frequently constitute a complex embracing a variety of functions. Few examples exist in this country, except where rail yards have been decked to permit large scale redevelopment (e.g. Illinois Center in Chicago, which is usually considered an air rights project, even though once-active railroad tracks have been removed). The Toby Center Station outside Stockholm is one example from abroad of coordinated joint development on a substantial scale. The center includes 14 separate functions -- schools, apartments, a shopping center, a medical center, churches, a gymnasium and a sports arena, with pedestrian traffic completely separated from vehicular movement. In this case, public involvement is usually extensive, since planned centers at this scale are normally beyond the capabilities of unassisted private developers.

In summary, the three types of projects discussed above -- air rights, adjacent, and area joint development -- tend to be differences in degree, and the distinctions developed here are seldom drawn in the literature. The usefulness of this typography of "significant" projects, though, will become apparent from review of the relevant joint development experience to date, as set forth below.

Origins and Evolution of Experience

One difficulty in assessing joint development practice, as distinct from discussions about the subject, stems from the limited documentation of significant projects to date. With a few recent exceptions, most existing literature deals with potential opportunities and constraints associated with joint development, rather than experience with completed projects. Accordingly, an initial inventory of significant joint development projects ("significant" in the sense as defined above)

was compiled as part of the present study.^{1/} While hardly constituting a census of such projects, this initial inventory does serve to dimension the scale of significant joint development to date, as well as to provide some historical perspective since the first commercial uses were combined with transportation improvements (notably around trolley extensions and railroad terminals) about a century ago.

Review of this information suggests that, while transit and other public agencies increasingly acknowledge the need to plan for adjacent land use, neither the number of significant projects nor active government involvement has been extensive, at least until recently. Specifically, joint development as of 1977 -- involving a sizeable transit component (as distinct from other modes) and significant revenue producing uses -- appears confined to perhaps two dozen existing projects in North America, about half of which have been constructed in U.S. cities (see Exhibit 3.2, page following). Moreover, many did not involve noteworthy public participation beyond the normal regulatory reviews, permits and other usual business of government.

Though significant joint development projects are limited in number, the experience to date is rich and diverse, especially in several contemporary ventures involving a significant degree of public sector involvement by transit and/or development entities. To provide further perspective on evolving practices, over a dozen of the most prominent projects are profiled below. They are organized by the mode of transportation concerned, set forth in a roughly chronological sequence, and selected for their importance in the historical evolution of joint development. The cases begin with the trolleys at the turn of the century, continue with a discussion of railroad and highway projects, and finish with transit-related projects from the early 1960's to the present.

^{1/} As detailed subsequently in this section, this inventory drew on a telephone inventory, the project files of Gladstone Associates (compiled in the course of its economic consulting practice), land development reference data available through ULI - The Urban Land Institute and several recent reports which have begun to document significant joint development projects. In this latter connection see especially, Rice Center for Community Design and Research, Built or Imminent Examples of Value Capture/Joint Development (July 1976) and Administration and Management Research Association and Office of Midtown Planning and Development, Transit Station Area Joint Development: Strategies for Implementation (December 1976).

SIGNIFICANT JOINT DEVELOPMENT PROJECTS
OF A TRANSIT-RELATED NATURE IN U.S. AND CANADA

1977

<u>Project Name</u>	<u>Metro Location</u>
1. Banker's Trust	New York, New York
2. Center Square	Philadelphia, Pennsylvania
3. Citicorp Center	New York, New York
4. Crystal City	Washington, District of Columbia
5. Eaton Center	Toronto, Canada
6. Embarcadero Station/Market Street	San Francisco, California
7. Eglinton Center	Toronto, Canada
8. Fairlane Center	Detroit, Michigan
9. Farragut North	Washington, District of Columbia
10. Gateway	Toronto, Canada
11. Grand Central Complex	New York, New York
12. Hudson's Bay Center	Toronto, Canada
13. Illinois Center	Chicago, Illinois
14. Oakland City Center	Oakland, California
15. Place Bonaventure	Montreal, Canada
16. Rockefeller Center	New York, New York
17. Seattle Center/Westlake Mall	Seattle, Washington
18. Sheppard Center	Toronto, Canada
19. Standard Oil Building	Chicago, Illinois
20. The Gallery/1234 Market Street	Philadelphia, Pennsylvania
21. Washington Street Station/Jordan Marsh	Boston, Massachusetts
22. Westmount Square	Montreal, Canada
23. Wheaton Center	Chicago, Illinois

Note: Above examples refer to existing or substantially completed projects. In some cases, the "project" involves a single building (e.g. Citicorp Center), in others several structures which are part of the same master plan (e.g. the Gallery/1234 Market Street, at two separate station stops, both within Philadelphia's Market Street East renewal project area.

Source: Gladstone Associates.

"Streetcar Suburbs"

The advent of the streetcar in the 1900's transformed urban living. Prior to this form of transportation, only the wealthy had short-distance mobility, principally by means of their own private carriages. Horse-drawn omnibuses operated in a very few cities, rarely extended into the suburbs, and frequently were plagued by shaky, short-lived management and financing. Laborers were limited by the distance they could walk twice a day, and the city was a smaller, more limited geographic area. With the advent of the streetcar people could work in the city and live on its fringes. Commuting, the wave of the future, was taking shape and city limits expanded dramatically. In 1850, for instance, Boston was a "pedestrian" city with a three mile radius, but by 1900, with public transportation in place, the city had been transformed into an urban metropolis with a ten mile radius.^{1/}

An early venture into suburban rail which encouraged others to further projects, and which was perhaps the most ambitious promotion attempted, was that of Henry Huntington of Los Angeles. As historian Daniel Boorstin observes:

"The urban sprawl which characterizes modern Los Angeles received its initial impulse from the designs of Henry E. Huntington. In 1900, after inheriting a vast fortune from his uncle, Huntington began to extend streetcar lines in all directions from Los Angeles. Simultaneously, he purchased thousands of acres of real estate along the lines and began developing residential and resort communities. In this way Huntington constantly recouped the cost of his car lines through the sale of his real estate.

Eventually his street car lines, valued at \$100 million in 1910, extended thirty miles from the city, serving at least forty incorporated communities and adding twelve suburbs to metropolitan Los Angeles."^{2/}

1/ For the definitive work dealing with development of Boston during early transit years, see Sam B. Warner, Jr., Streetcar Suburbs: The Process of Growth in Boston, 1870-1900 (New York, N.Y., Atheneum Press: 1973).

2/ Daniel Boorstin, Portraits from the Americans: The Democratic Experience. (New York, Random House, 1975) p. 87. In addition to developers, electric utilities in some cities joined forces, and occasionally promoted, the construction of pre-automobile transit. Until recently, for example, streetcar service in New Orleans was subsidized from revenue of the electrical utility.

The process was also accelerated by forces that changed the social geography of American cities, for as migrants from rural America and Europe flooded urban areas, the wealthy and elite fled. Consequently, in the early 1900's rail suburbs burgeoned in New York, Chicago, Boston and Philadelphia, and developers of communities like Shaker Heights combined their real estate investments with investments in rail service to them. ^{1/}

Railroad-Related Joint Development

Railroad related joint development dates from the early 1900's. The development of air space for New York Central Railroad's right-of-way is usually considered to be the first major commercial use of transportation right-of-way air space in the U.S. With the huge sums placed in railroads since the late 1890's and the extent of the U.S. railroad network that developed, it is not surprising that railroad air rights provide the greatest number of joint development projects involving important private investment. Local government involvement was limited because in many cases the companies had been granted powers of eminent domain or other special privileges in the formative stages of their growth, which could be used to advantage in creating new projects. Subsidiary corporations frequently formed arrangements with their parent railroad corporation or with other private developers, and raised capital in the manner of other private companies. In short, public sector participation was minimal, and the financing techniques were those traditionally used by private investors in the U.S. (though many so-called private railroads received subsidies from national, state and local governments when they were originally constructed).

^{1/} Shaker Heights, in suburban Cleveland, was developed in the early 1900's by the Van Sweringen Brothers and became one of the most famous rail suburbs of that period. Unable to obtain satisfactory transit service, the Van Sweringens purchased the Nickel Plate Railroad in 1916 and started the Shaker Heights Rapid Transit line several years later. The development also had landscaped circilinear streets, community facilities, commercial areas and architectural standards far in advance of its time. This combination of sophisticated community development and superior transit service made Shaker Heights one of the most successful suburban developments in the 1920's.

The extension of government regulation in subsequent decades, and the bankruptcy of many U.S. railroads, have radically altered this picture. Consequently, railroads and their subsidiary corporations now undertaking private development often require greater government assistance in the form of city capital improvements or similar financing aids. A case in point is Illinois Center, where the city of Chicago is providing some \$100 million in public improvements as part of a \$2 billion mixed use development. ^{1/}

Some of the most interesting issues in railroad joint development arise from the physical problems of construction over railroad right-of-way, and have a bearing on problems of transit-related joint development. For example, they require similar agreements on liabilities and responsibilities for column and wall supports, and multi-level station access. The following exhibits highlight the history and importance of some of the most prominent railroad-related joint development projects, as well as roles played by the public sector.

In reviewing these projects, three major differences are evident that limit the relevance of railroad-related projects in a study dealing with today's typical transport entities:

- First, railroads have historically been private bodies with powers to finance joint ventures with private developers.
- Second, railroads are not constrained by "transport purpose" or "public good" considerations, as is the case with other transit entities.
- Third, railroads have traditionally been operated as a private business with an attendant incentive and reward structure to encourage entrepreneurs, especially in subsidiary real estate development corporations, and have been recognized as members

1/ This massive project also illustrates several special historical features, including long ownership of one 83 acre property -- formerly a busy terminal and marshalling yard -- by the Illinois Central Railroad (now part of ICI, Illinois Central Industries). Under previous agreements, no property taxes are paid on undeveloped portions of the site, until parcels are converted to redeveloped uses, consistent with a planned development ordinance worked out with the city. Annual tax revenues upon completion, however, are estimated to approach \$60 million.

of the investment community. 1/

A detailed description of such projects follows.

Highway-Related Joint Development

The history of highway-related joint development is much shorter. Essentially, one sees private funding superseded by government funds, especially large state and federal grants. Of course, the evolution of highway financing itself is different from that of railroads and trolleys because it goes back to the centuries-old tradition of city, provincial and national responsibility for certain parts of the public thoroughfare. Thus there are few cases of private development over highways, and the first important ones date from the late 1950's and early 1960's.

The relatively small number of projects can be traced to a variety of circumstances. For instance, highways have a different impact on the value of adjacent land, and possible uses for it, as distinct from railroads or rapid transit. In comparison to rail arteries, characteristically they generate less average daily traffic, bring fewer numbers of people to the developed area and are hence less advantageous to, say, office or retail components of a real estate project. Also the highway's accompanying nuisances may limit use of adjacent land for certain purposes (e.g. housing). Historically, another factor has been that private real estate developers were initially unfamiliar with the obstacles to the use of highway air space. Legal restrictions on the freedom to dispose of highway rights, and an absence of policy guidelines, provided further hindrances to highway joint development.

Recently, though, some highway-related joint development projects have been initiated by government authorities, who subsequently took a major role in the arrangements. Such authorities include state agencies, city agencies, and quasi-public bodies like the Port Authority of New York and New Jersey. The ensuing developments contain such varying components as restaurants, apartments,

1/ See also National Cooperative Highway Research Program Report, #142, Valuation of Air Space (1973).

PROMINENT PROJECTS
RAILROAD-RELATED JOINT DEVELOPMENT
1900-1970's

<u>Project Name/ Location/Status</u>	<u>Project Profile</u>	<u>Noteworthy Aspects</u>
Park Avenue Development, New York. Early 1900's to the present. Completed.	<p>In the early 1900's, New York Central's wide, depressed right of way was generally held to be detrimental to its surroundings. In 1913, with pressure from the City, the railroad decked some 20 acres of land north of Grand Central Terminal. The air rights over the underground trackage were sold or leased, to become the Park Avenue development, Waldorf Astoria, Madison Square Garden, Pan Am Building and other high rise commercial and residential facilities. By and large, these projects were financed and developed by other private parties. In turn, the railroad also leased rights over the terminal to its subsidiary, New York State Terminal and Realty Company, which shortly thereafter erected three major hotels. The first of these, the Commodore Hotel, was built in 1919 and is currently planned for a major renovation into a contemporary convention hotel. During this construction, a subsurface easement was granted to enable construction of the Lexington Avenue IRT subway. <u>1/</u></p>	Represents the origin of significant air rights used in the U.S. This project, and Grand Central, were facilitated by single ownership of the rail facilities and developable air rights. Public sector role primarily confined to pressuring railroad to undertake air rights development.
Merchandise Mart and Daily News. Chicago Illinois. 1920's. Completed.	<p>Probably the second major development of air rights occurred in Chicago in the late 1920's when the Merchandise Mart and Daily News were built over the Illinois Central right-of-way. The Prudential Mid-America Building and Marina Towers were added in the 1950's. Essentially, these entailed development agreements between private parties. Extensive use of air rights continues today, notably in the Illinois Center project profiled below though the tracks were removed before construction began in 1962. <u>2/</u></p>	Important here was the method of valuing air rights used by Illinois Central Railroad which provided a pattern for other cases since then. Public sector role relatively limited.
Penn Center, Philadelphia, Pennsylvania. 1930-1971. Completed.	<p>Development of this three block project area began in 1930 with the construction of Suburban Station. The second phase, Transportation Center, completed in 1957, added an office tower, Greyhound bus terminal and a four level 1,000 car garage. By 1971, the third phase was complete with the addition of three office buildings and a plaza. The city planning commission and architect Vincent Kling and Associates conceptualized the master plan in the early 1950's and prodded the railroad into the implementation of the concourse system. The Penn Railroad and other private resources provided financing for the Suburban Station complex and Penn Center proper with the remainder of the site subdivided over time as private companies became interested. Lease and access agreements afford the railroad control over the concourse and the nature and design of connections. The site for one private building was condemned as part of an unassisted urban renewal project. The plaza was publicly financed. At present there exist 2.7 million square feet of office space, 500,000 square feet of retail in the underground concourse, a 500 room Sheraton Hotel and an underground parking garage. There is an extensive system of pedestrian traffic. The concourse level serves Penn Center, Transportation Center and Suburban Station traffic and includes small sunken plazas, an ice skating rink, and connections to buildings, retail and the plaza. Commuter rail and transit service are also provided. <u>3/</u></p>	The essentially single ownership was critical for project development, and made it easier for the public sector to obtain desired improvements. Public sector role was primarily to conceptualize possible redevelopment and to pressure railroad to implement same.

1/ Administration and Planning Research Association of New York City, Inc.; Transit Station Area Joint Development: Strategies for Implementation. (New York, 1976); National Cooperative Highway Research Program Report, #142, Valuation of Air Space, Highway Research Board (Washington, 1973).

2/ NCHRP, op.cit., pp. 16-20.

3/ AMRA, op.cit., and Robert Witherspoon, Jon P. Abbott and Robert Gladstone, Mixed Use Development: New Ways of Land Use (Urban Land Institute: Washington, 1976), thereafter referred to as MUD.

Source: Above and Gladstone Associates.

PROMINENT PROJECTS
RAILROAD-RELATED JOINT DEVELOPMENT (cont'd)
1900-1970's

<u>Project Name/ Location/Status</u>	<u>Project Profiles</u>	<u>Noteworthy Aspects</u>
Illinois Center, Chicago, Illinois. 1969-1989. Under construction.	<p>Located immediately east of the dense downtown area and bounded by the Chicago River on the north, Lake Michigan on the west and Grand Park on the south, this 83 acre site offers excellent transportation and attractive frontage. Ten acres have been developed to date. The master developer is Illinois Center Plaza Venture - a joint venture between Illinois Center (subsidiary of Illinois Center Industries which is also parent company of the Illinois Central Gulf RR) and Metropolitan Structures (Chicago based developer). Development procedure is that ICPV purchases raw land from the railroad on a prearranged staged take-down basis. ICPV is responsible for land preparation and infrastructure development with city assistance, and then sells ready-to-build sites to builder/developers. The project is anticipated to reach build-out in 1989. There is not a firm overall architectural design scheme and phasing is to be determined largely by market factors. However, plans call for 9,900,000 square feet of office space, 1,250,000 square feet of retail space, 4,500 transient rooms, 13,500 residential units, 16,000 parking spaces and 22 acres of open space including a 6 acre park in the center of the site and a 4 acre esplanade along the Chicago River. Only 25 percent of total area will be developed with tower structures. Each new building must be reviewed for conformance to the project's infrastructure requirements. This unique infrastructure consists of three distinct vehicular levels — one for deliveries, one for through traffic and one for local traffic — and a pedestrian level immediately beneath the plaza level. The major concourse — comprising 40 foot wide enclosed, climate-controlled walkways running from Grant Park to the Chicago River and from Michigan Avenue to the lake front — will make the lakefront and riverfront parks directly accessible from downtown Chicago. These pedestrian connections will be lined with shops, cultural facilities and landscaped open plazas and will meet in the center of the site at the open air park. Minor walkways will connect to major areas and adjacent buildings giving an interconnection to all buildings. In addition to this multi-level system, transportation to and within Illinois Center will be provided by bus service, commuter service via Illinois Central Gulf Railroad and an extension of the Chicago subway system. The City of Chicago is responsible for overall regulations and development controls, and financial responsibility for parks, arterials and major thoroughfares in the project (an estimated \$100 million out of a total of \$165 million for public improvements). 1/</p>	<p>Unusual multi-level infrastructure, involving extensive pedestrian connections, direct access to bus, commuter and subway lines; excellent project location; public/private cooperation; utilization of air rights and major project scale. Public sector role extended from early conceptualization of possible redevelopment (initially, in a 1909 city plan by Daniel Burnham) to present day provision of capital improvements.</p>

1/ Chicago Urban Transportation District Technical Bulletin #76-1, Joint Development, the Urban Partnership (Chicago, 1976), and MXD case study, op.cit.

Source: Above and Gladstone Associates.

commercial buildings, and hotels. The following exhibits discuss some of the more notable projects in this area.

Transit-Related Joint Development

With a few exceptions, transit-related joint development in the U.S. dates from the mid-1960's, mainly because until then only five metropolitan areas had a rapid rail system and these were chiefly developed in the early part of this century. Canadian experience, especially in Toronto and Montreal, is far more extensive.

In most cases, transit-related joint development in this country has been a by-product of the revival of transit construction, beginning in the 1960's with San Francisco and other cities and subsequently expanding to Washington, D.C. Supporting this revival in transit construction, of course, has been the steady growth of federal assistance. Historically, federal policy toward urban transportation has taken the form of extensive outlays for streets and highways. Federal assistance for urban mass transportation first became explicit in the Housing Act of 1961 and with the expansion of that program in the Urban Mass Transportation Act of 1964. Under this legislation and subsequent amendments, the federal government undertook a modest program of financial support for research and development of public transportation improvements. A significant expansion of federal effort occurred in 1970 under provisions of the Urban Mass Transportation Assistance Act of that year, whereby a \$10 billion capital assistance program was enacted. Under the Act, to be carried out over a 12-year period, the Secretary of Transportation could make contractual obligations for such purposes as the improvement and extension of new transit systems, the modernization of rail commuter services, and the purchase of buses and related equipment. The significance of this Act is that for the first time in the history of this country a national program for the improvement of urban mass transportation has been undertaken on a substantial scale.

Three years later, legislation of comparable significance was signed into law. Although titled the Federal Aid-Highway Act of 1973, this legislation contained a number of provisions affecting transit, most importantly by providing state and local officials with greater flexibility for financing urban transportation. In brief, this new Act opened up the highway fund for mass transit beginning in fiscal 1975;

PROMINENT PROJECTS
HIGHWAY-RELATED JOINT DEVELOPMENT
1900-1970's

<u>Project Name/ Location/Status</u>	<u>Project Profiles</u>	<u>Noteworthy Aspects</u>
Prudential Center. Boston, Massachusetts. 1952-1962. Completed.	<p>Prudential Center was probably the first major air rights project of a highway-related nature. The Prudential Insurance Company, fee owner, purchased the site from the Boston Redevelopment Authority in 1952. In 1962 Prudential conveyed an easement to the Massachusetts Turnpike Authority for the highway and gained permission from them to build over the easement. The highway and Penn Central railroad tunnel were then constructed at the same time as the Center. Turnpike Authority permission is required for any further construction over the easement. The development is composed of a 52-story office tower and a 25-story office high-rise, three 28-story apartment buildings containing 781 units, the 29-story Sheraton Boston Hotel (convention hotel with 1,430 rooms and 23 function rooms totaling over 31,000 square feet), 4 low-rise commercial buildings and a Lord & Taylor and Saks Fifth Avenue, 3,500 parking spaces (3 underground levels and some surface), restaurants, a plaza and the City of Boston's John B. Hynes Civic Auditorium with 150,000 square feet of exhibition space on 3 levels. Total area of the project is 32 acres, with 15 acres devoted to open space. Prudential utilized Massachusetts State legislation permitting tax abatement for new development and the Boston Redevelopment Authority supervised the construction of the Prudential Tower. The city owns and operates the \$12 million civic auditorium. As a result of the development on air rights, Prudential Center connects directly with 3 rapid transit stops (MBTA) two main lines of the Boston and Albany Railroad, and the 8 lane Boston extension of the Massachusetts Turnpike which has an interchange feeding directly into the complex. A private ring road, designed to ease access, encircles the project. <u>1/</u></p>	Important for the air rights development chronology, the current integration of various transportation elements and use of property tax stabilization (State of Massachusetts "Section 121(a)" program). Public sector role included tax stabilization for private development and provision of major project component (civic center).
George Washington Bridge Apartments. New York. 1956-1962. Completed.	<p>In 1965 the New York Port Authority agreed to quit claim to its air rights over the depressed expressway and the rights were sold at public auction. They were purchased by Kratter Corporation (for \$1,065,000 subject to air rights development for residential use) which subsequently erected the four 32-story apartment buildings in 1961-1962. The site totals about 3 acres over 12 lanes of the expressway, with four clear spans of approximately 44 feet each. In addition, Port Authority offered to incur the cost of beam bearing the retaining walls, column footings between traffic lanes, and lighting equipment and ventilation below the structures. New York State also participated in the project, providing a low debt service factor of 5.05 percent under the Limited Profit Housing Companies Law; the City of New York preferred a reduced property tax assessment, and the sponsor's return on equity investment was limited to five percent. <u>2/</u></p>	One of the few residential highway-related projects. Also, Port Authority has an unusual role here, which is analogous to that of city government transportation agencies who agree to provide the costs for supports of subway stations below other developments. Public sector role included payment for certain infrastructure costs, provision of financing for assisted-housing and some tax abatement.
Gateway Center, Boston Metropolitan Area. 1963-1971. Completed.	<p>In 1963, during construction of the highway, the Massachusetts Turnpike Authority suggested air rights development on the site to the City of Newton. Nearby was an interchange, and the highway was sufficiently depressed to allow at-grade construction. The developer (presently Gateway Realty Trust) thought the site had good prospects for commercial development, and accordingly made a proposal to the City. The project contains a 9-story office building, a 12-story hotel with restaurant and a 6-story parking structure and is considered successful by its developer. <u>3/</u></p>	Good example of private developer using highway air rights with cooperation from public authorities through appropriate zoning, and in a suburban setting. Much of the initiative came from the public authorities involved. Public sector role was primarily that of providing zoning to accommodate development.

1/ MXD, op.cit., and NCHRP, op.cit.

2/ Ibid.

3/ Ibid.

also beginning in fiscal year 1974 urban areas could choose to substitute their urban system allotment from the trust fund for an equivalent amount of funds for general revenues for mass transit purposes, both bus and rail; and it further provided federal money for mass transit purposes from general funds in cases where an Interstate project is withdrawn upon the request of the local governments and the State governor.

Concurrently with this large-scale national program of capital assistance for transit, a number of transit-related joint development projects have been undertaken in this country. These, together with the Canadian examples, are developed through diverse combinations of public and private participation, and in some cases the innovative financing techniques previously discussed. Coordinating these projects generally demands the cooperation of a multiplicity of private participants and public entities. Frequently, these include the developer, his key tenants and major lenders and (on the public sector side) local development authorities, the city council, the state government (both agencies and legislatures), and the Federal Government. In some projects, financing originated not from DOT, but under the urban renewal program with HUD grants and loans from the Federal government that enabled the city to acquire the land for development. City and State matching funds then combined with UMTA funding for construction of the transit component itself.

Ensuing projects described in the following exhibits are characteristically sizeable, multi-use developments tied to fixed guideway systems through special pedestrian connections to the transit stations. North American experience with this type of project is most extensive in Toronto and Montreal, each with numerous examples. Perhaps the largest network cluster of such projects is "multi-level Montreal," where some 17 large-scale projects rise from platforms containing plazas, malls, covered shopping arcades, parking garages and underground trucking areas. These elements, in turn, are interconnected to streets, subway stops, and railway stations. Place Ville Marie was the first of such projects, begun in 1957; it now comprises a seven acre complex linked by walkways to Metro mezzanines, the CNR railway station and adjacent office and shopping areas. When combined with other abutting blocks, there are 100 acres of multi-use land linked by 10 miles of pedestrian walkways. (See Feature Box, page following).

"MULTI-LEVEL MONTREAL" AND SOME PARALLEL APPLICATIONS
OF AREA-WIDE PEDESTRIAN SYSTEMS

One of the most remarkable revitalizations of a major downtown district has occurred in Montreal, where mixed use and other major projects rise from platforms containing plazas, mall, covered shopping areas, underground trucking networks and parking garages. These elements, in turn, are interconnected to streets, subway stops, and railway stations. This exciting pedestrian environment integrates a full spectrum of urban functions. The result is that whole sections of Montreal's city center have been revamped into a multilevel complex which is attractive, easily accessible, and economically viable.

In addition to mixed use, a key element in Montreal's revitalization is the privately-built, grade-separated pedestrian system which has been linked into the city's metro mezzanines. City planning consultant Vincent Ponte — who has pioneered this concept in Montreal and other cities — offered these observations as to how "multilevel Montreal" evolved:

"I am often asked how we are able to achieve this transformation without tearing up the city, and still have accomplished our initial goal in the short span of 15 years. The answer is that we don't have to tear up the city; it is tearing itself up already, wiping out block after block of old structures to make way for new. In this, Montreal, is not unique. Downtown areas nowadays are renewing themselves at unprecedented speeds. All any city needs is a set of guidelines and the multilevel system can be inserted into the fabric of any city in the course of its natural growth. It can come into existence piecemeal, segment-by-segment.

The process hinges considerably on the trend to superblock and multi-block developments. By virtue of the kind of large multi-use projects such as your study speaks of, extensive sections of the future multilevel system can be incorporated automatically. Even in the interstitial blocks, developers of smaller lots are quick to see the advantage, once its profitability is pointed out to them, of designing certain spaces below-grade for trucking and pedestrian walkways even if they have to use them for storage space for five or six years, or whatever, until they can be connected into the expanding multilevel system including public transit facilities.

This is the method which we have employed in Montreal, beginning in 1957 with Place Ville-Marie. Private developers here are prepared in most cases to insert their share of the

system at their own expense. They are going to construct, anyway and it costs little more to make the necessary provisions than not to. The proven pay-off is higher revenue from rents and the greater satisfaction of thousands of employees, shoppers, tourists and conventioneers who can get about the city center, comfortably and pleasantly, without having to cross busy streets or go out into inclement weather. The only significant cost to the public sector in such a pedestrian system would occur where the multilevel walkways underlie or cross a public right-of-way, and that, in my experience, is only 10 percent or less of the entire system.

The case in Montreal was proven first with Place Ville-Marie. Since this seven-acre project opened its doors in 1962 another 16 multi-use projects, ranging from one to ten acres in size, have been constructed. In combination with other existing abutting blocks we now have some 100 acres of multi-use land linked together by ten miles of pedestrian walkways of which 7.5 are privately financed and 2.5 miles are in the metro mezzanines and corridors."*

While Montreal has accumulated the most experience, a similar approach — whereby a multilevel pedestrian system is introduced in small segments as a regular feature of redevelopment — has been applied elsewhere, even in the absence of transit. Examples include Dallas; Atlanta (the Underground); Houston (Shell Plaza, Pennzoil Place, and adjacent areas); and the Skyway Systems in Cincinnati and Minneapolis. In Minneapolis, for instance, development is taking the form of a continuous network of weather-protected pedestrian ways throughout the downtown area. Upon expected completion in 1985, a total of 76 pedestrian bridges will interconnect 64 city blocks and will provide direct linkages to a "frame" of parking facilities around the core area.

*Letter from Vincente Ponte, August 1975. For an earlier and more detailed account, see his article "Montreal's Multilevel City Center," in Traffic Engineering, (September 1971).

Source: Robert Witherspoon, Jon P. Abbott, Robert Gladstone, Mixed Use Development: New Ways of Land Use (Urban Land Institute: 1976) p. 93.

PROMINENT PROJECTS
TRANSIT-RELATED JOINT DEVELOPMENT
1950-1980's

<u>Project Name/ Location/Status</u>	<u>Project Profile</u>	<u>Noteworthy Aspects</u>
The Gallery at Market Street East, Philadelphia. 1947-1980's. Part I. Completed.	<p>The plan for redevelopment of this stretch of Market Street, a 50-acre area extending 5 blocks east of city hall, dates from the late 1940's. However, active involvement at the 9th and Market street site by a private developer (Rouse Company, of Columbia, Maryland) did not commence until the early 1970's, after Gimbel's had committed itself to construct its new downtown store on the north side of Market at 10th Street, one block away from the existing Strawbridge & Clothier department store. The Gallery, co-developed by the city's Redevelopment Authority and Rouse, is a four level retail mall, linking all floors of the new Gimbel's with the existing Strawbridge & Clothier structure, and a renovated SEPTA (Southeastern Pennsylvania Transit Authority) station at 8th Street, including connections to the "Lindenwold Line." As an integral part of development to date, this subway and commuter rail station serving The Gallery was completely renovated and substantially enlarged. Completing the larger project called for planning, land assembly, and site and building improvements by the city's Redevelopment Authority (under a series of HUD grants), renovation of the 8th Street station by SEPTA (using UMTA funds), and a substantial private investment by the Rouse Company (in addition to debt financing through a consortium of local lenders), Gimbel's and Strawbridge & Clothier. Construction is now complete between 8th and 10th Streets along the north side of Market Street East; future plans include air rights development over the retail mall, continuation of the project westward to City Hall, and connection with the proposed Center City Tunnel, a 1.8 mile commuter rail connection linking the Reading and suburban station terminals.</p>	Ambitious concept, scale and extensive pedestrian connections between transit, existing development and new projects. Public sector roles range from planning, land assembly and site improvements, through construction of a 4 level retail mall (The Gallery), and subsequent lease to private developer (The Rouse Company).
Place Bonaventure. Montreal, Canada. 1964-1967. Completed.	<p>Place Bonaventure was begun partly in response to the success of Place Ville Marie and projects like it, and partly in response to the multi-farious projects that went up on Montreal just before the World's Fair, some of which made the location very attractive from a commercial standpoint. An important feature of the Place Bonaventure is the system of underground passages linking the Place with the METRO station of the same name, the Canadian National Railway Station under the Queen Elizabeth Hotel, Windsor Station, the Place Ville Marie and other locations of Montreal. These passages are owned and maintained by each building, (except those directly part of each METRO stop) and have proved immensely successful in luring Montrealers out to shop even in the midst of the Canadian winter. There is also direct (but hard to find) access from the Autoroute Bonaventure and the Trans-Canadian Highway to the Bonaventure parking garage. The building itself is a square, monolithic structure, substantially more interesting inside than out. It totals 3,100,000 square feet, with 200 business offices, 850 wholesale showrooms, a 200,000 square foot exhibition hall, the Hotel Bonaventure (401 rooms) and 1,100 indoor parking spaces. The passages also funnel into the exhibition hall, where such events as fashion shows, entertainment performances, restaurant shows and car shows are held. <u>2/</u></p>	Extensive pedestrian connections to transit and highway modes, as well as to adjacent properties. Public sector role extends from encouraging direct access to transit station from adjacent properties, to providing some portions of the pedestrian system.

1/ Rice Center, Built or Imminent, op.cit.

2/ Gladstone Associates Project Files.

Source: Above and Gladstone Associates.

PROMINENT PROJECTS
TRANSIT-RELATED JOINT DEVELOPMENT (cont'd)
1950-1980's

Project Name/
Location/Status

Eglinton Station/Center,
Toronto, Ontario. Completed.

Embarcadero Station/Market Street. San Francisco, Calif. 1959-1976. Substantially Completed.

Project Profile

Eglinton Center is one of the numerous multi-use projects in downtown Toronto that have emerged in the last decade. Construction began on the Center in 1971. It is located at the junction of two major arterial highways and partly on top of a subway line. On the Eglinton Street side there is a regional bus terminal which is connected to the subway stop beneath the Center by a pedestrian tunnel. The station itself was built earlier by the Toronto Transit Commission, but it was the developer who constructed (and paid for) the tunnel across the streets and to the station. Hence, total costs were shared by the Toronto Transit Commission, Metropolitan Toronto, and Greenwin Corporation (the developer). Eglinton Center itself possesses 650,000 square feet of residential space, 700,000 square feet of office space, retail areas and parking. This is distributed in two towers above the retail podium. Also adjacent to the center is "2180", a commercial tower recently renovated and the property of the Bank of Montreal. Walkways also connect this building to the Eglinton Center and Station which were designed to relieve pedestrian traffic congestion.1/

Embarcadero Station was conceived in 1959, but did not actually open until 1976. It is located two blocks from the Center of that name on the fringes of the 15-acre Golden Acre Redevelopment Area. BART had originally planned for the station to be elsewhere, but strong pressure from the exponents of the Market Street Development Project and the Embarcadero Center led to an eventual agreement on the present location. But because BART was having financing problems, the protracted negotiations having substantially raised costs, new means had to be found. Thus the station, built at a total cost of \$29 million, was funded through the San Francisco Redevelopment Agency, with funds raised through tax increment financing and a \$24.5 million General Obligation Bond. A "Joint Powers Agreement" regulates the relationships of the agencies involved. It states that proceeds from the bond issues were to be held in escrow by the San Francisco Transit Task Force, to be used by BART on that station. In a larger context, the Embarcadero Station is part of the Market Street area, a focal point for redevelopment and office building in downtown San Francisco. In this connection, the city is completing a street beautification plan which includes some BART station entrances in commercial buildings or through sunken plazas. The City has also offered bonus zoning for Market Street to encourage development near the stations, but few builders have elected to provide direct access to the station to date.2/

Noteworthy Aspects

Cost sharing to help connect different modes of transportation and adjacent private development. Public sector role extends from encouraging direct access to transit station from adjacent properties to providing some portions of the pedestrian system.

Pressure from private (i.e. downtown business interests) and public (i.e. City of San Francisco) sources to provide transit station not previously planned as part of BART system. Public sector role extended from use of tax increment financing (for about one half of station costs) and joint powers agreement (in the case of Embarcadero Station) to offering a density bonus in return for real estate development close to or directly connecting with transit stations (in the case of the Market Street area).

1/ Gladstone Associates Project Files

2/ Rice Center, Built or Imminent, op. cit. and AMRA, op. cit.

Source: Above and Gladstone Associates.

PROMINENT PROJECTS
TRANSIT-RELATED JOINT DEVELOPMENT (cont'd)
1950-1980's

Project Name/
Location/Status

Seattle Center/Westlake Mall, Seattle, Washington. Center is completed. Mall is planned.

Project Profile

Seattle Center is located at the "suburban" end of an existing monorail on the site of the former Seattle fairgrounds. Constructed at the time of the Seattle World's Fair, the monorail is an Allway system, operating on a fixed, one mile guideway, with two trains of three cars each on a shuttle between the fairgrounds and downtown. The fairgrounds comprise some 74 acres. Major structures include a new (i.e. constructed since Seattle fair) opera house, a major coliseum (18,000 seats) and a science museum. Other facilities include amusement rides, a high school football stadium, fountains and other public amenities. Substantial surface parking at the site also permits monorail use as a commuter line to downtown.

At the other end of the monorail will be the new Westlake Mall, a \$60 million multi-use project recently approved by the City Council of Seattle. It will include a garden, museum, two large public plazas, an 11 story building with a 300 room hotel and 3 stories of space for shops, the monorail terminal and a 300 car underground garage. The terminal will be financed by the City with the help of an UMTA grant, and is planned in coordination with the rest of the project. The balance of public components in the project will be financed by the sale of \$8-10 million worth of bonds, and the formation of a public corporation authorized to raise another \$7.5 million. MONDEV, the developer, undertakes to finance the rest of the \$60 million, and the resulting non-public areas will be leased to them. Financing in this manner will hopefully prevent any drain on the City's general fund, and will help the City to gain millions in increased property taxes and revenues.^{1/}

Hudson's Bay Center, Toronto, Canada. 1968-1974. Completed.

In the late 1960's, the Fidinam group was seeking a major project outlet for increased capital investment. When the subject site became available in the heart of Toronto (intersection of Bloor and Yonge Street transit lines), they swiftly purchased it, leased an adjacent portion of air rights property from the TTC and commenced construction. The Center, completed in 1974, consists of office space, "The Bay" department store, a hotel, 304 residential units, other retail stores, and 1,100 parking spaces. Certain considerations affected the planning and construction, such as maximizing the rental space in 12:1 zoning, catering to the greatest variety of occupants to hasten leasing, and coping with the subway intersection beneath, which had to remain open throughout construction. In fact, part of the land is surplus subway land, an irregular parcel of 59,833 square feet; and the "Bay" store itself ascends five stories up from the below-grade subway station. By agreement with the Toronto Transit Authority, the present owner agrees to help maintain and operate this subway station, which is at the crossroads of two major arterial streets. Access to the station is possible through the store and various other points in this complex and is guaranteed as a condition of the lease. Capital costs incurred by expanding the station to accommodate the increased traffic were also backed by the developer, and that station complex has a combined capacity of 80,000 persons per hour. Other links are planned to connect various projects in Toronto, both underground and overhead.^{2/}

Noteworthy Aspects

Seattle's "recycling" of fairgrounds where structures were deliberately built so as to permit conversion to subsequent uses, and apparently successful operation of people mover. Also, in the Westlake project, public purpose is extended to revitalize the central core; and the developer helps to finance "public" areas in the Mall. Public sector role extends from encouraging private development to direct provision of some public components in both projects, with revenue bonds and a public corporation anticipated in the case of Westlake Mall.

Bold design of the Center from an aesthetic and functional standpoint. Also private developer is bearing some of the station's capital costs and maintenance costs. Cooperation from the City and transit commission was needed, and obtained, in approving the plans, coordinating the construction, and continuing the station's operation. Public sector role extended from encouraging direct access to transit station from adjacent properties, to negotiating long term lease with private developer on air rights over subway station.

1/ Gladstone Associates Project Files.

2/ Ibid.

Source: Above and Gladstone Associates.

PROMINENT PROJECTS
TRANSIT-RELATED JOINT DEVELOPMENT (cont'd)
1950-1980's

<u>Project Name/ Location/Status</u>	<u>Project Profile</u>	<u>Noteworthy Aspects</u>
Wheaton Center, Chicago Metropolitan Area. 1968-1976. Phase I. Completed.	<p>Wheaton Center is a good example of early planning coordination and the benefits a City can gain through intelligent uses of its general powers of government, in this case a suburban jurisdiction. In 1968, the initial agreements were made between the City, developer (Mellugh and Levine) and the C and NW railroad for the construction of a new station and garage, and the residential complex. The developer acquired a site for commercial development from the railroad in downtown Wheaton, which was then sold with proceeds used to construct the new station. The City leased the site to the developer on which he built the commuter garage. He owns the structure and charges for parking based on an agreement with the railroad.</p> <p>In 1972, a new city government was formed. In return for city approval of project continuation, including a special assessment and special zoning, the developer purchased another site in order to build a new city maintenance garage to replace the one displaced by the commuter garage. The new garage is leased to the city for \$1 a year. Total residential development consists of 760 residential units, 416 parking spaces for 757 cars, commuter garage, 10,000 square foot commercial center and the maintenance building. Development costs totalled \$21,625,000 and the project was financed in part under the provision of FHA Section 207, Mortgage Insurance for Multi-family Housing.</p> <p>Phase II has not been started because of lack of financing. 1/</p>	Extensive planning between the developer, railroad and City. Public sector role involved land leasing, special benefit assessment and zoning to encourage desired development.
Washington Street Station/Lafayette Place, Boston, Massachusetts. Completed.	<p>Station modernization was conceived as part of the transit authority's continuing program for upgrading their transit system and was financed with a \$4 million UMTA grant. It was planned in conjunction with Jordan Marsh's consolidation and modernization of their flagship store in downtown Boston, and was an important factor in Jordan's decision to keep their downtown location. Construction and planning necessitated an exchange of easements with both Jordan Marsh and Filene's. Jordan Marsh supports resting on station right-of-way and station columns, and easements from Filene's were needed for new stairways and mechanical space. As part of a revised real estate policy, MBTA is installing retail concessions in the new fare-free zone between the two stores, and the easement exchange with Filene's gave the store a portion of this valuable space. Although there is no cost-sharing involved, station renovation helped spark the substantial addition to Jordan's downtown store and Filene's renovation of its facility. In the process, land has been made available after the Jordan Marsh consolidation for Lafayette Place, a major mixed use development planned for retail, office and hotel uses. 2/</p>	Station renovation helps catalyze store improvements. Also, easement exchanges between MBTA and the stores involve the new concession space, which both parties consider will prove valuable. Public and private sector provide funds for their respective renovation.

1/ Urban Land Institute Project Reference Files.

2/ Gladstone Associates Project Files.

Source: Above and Gladstone Associates.

PROMINENT PROJECTS
TRANSIT-RELATED JOINT DEVELOPMENT (cont'd)
1950-1980's

Project Name/
Location/Status

Farragut North Station.
1977-1980's. Under construction.

Fairlane Center. Detroit, Michigan. 1969-1990. Phase I substantially completed.

Project Profiles

Located in the center of the most prestigious office district in Washington, D.C., the Farragut North Station of the WMATA is expected to be the busiest station on the system, handling 60,000 passengers daily with heavy morning and afternoon service. A private developer has leased the property from WMATA and is completing a twelve-story structure including 145,375 square feet of office space and 41,650 square feet of retail space (in two basement levels and at grade and second level) above the metro stop. This lease has an initial term of 50 years unless notice is given one year prior to the end of the initial term. A minimum annual rent, (equal to a percentage of land acquisition cost) is paid and after two years additional rent will be calculated on the basis of a percentage lease, with WMATA having the right to audit the project's books and inspect building construction. The developer pays real estate taxes and pays for costs of locating the station's air-conditioning facilities on his roof. The metro stop is in operation now with a permanent entrance already constructed. This posed some design difficulties for the developer in terms of access to and through the building project. Consequently, careful consideration is being given to the best way to channel metro riders around and through the planned retail component. 1/

Land for this project has been assembled by Ford Motor Land Development Corporation, the developer, over the last two decades and is located near the City of Dearborn, nine miles west of Detroit. The present buildings are part of a larger conception of the total planned community, to comprise of office parks, commerce parks and industrial park, residential areas, a town center and trade center. Amenities will include libraries, a country club, a cultural-catering center for entertainments both public and private, and the usual appurtenances affixed to modern residential complexes. The 280 acre center of the complex is devoted to retail establishments, including four major department stores, and 120 smaller stores, featuring also covered walkways and multi-level malls. The transport aspect of the complex is Ford's "Automatically Controlled Transportation (ACT) System," which conveys passengers around the town center and to the parking garage. Its "cars" are small and light, each seating about 14 passengers. Ultimately, it is planned to connect many of the community's sections and to provide a new mode of mobility throughout the project. At the moment several office buildings, a 100 acre commercial park, part of the Town Center, and some of the residential areas are completed. Current cost to date is estimated at \$150,000,000 and total cost at completion is expected to reach \$2 billion. Fairlane is also negotiating with Amtrak for a station stop. 2/

Noteworthy Aspects

The project includes a public /private lease arrangement at a prime development location, along with certain rights retained by the public entity involved. Public sector role extends from encouraging air-rights development, to long term land leasing (including percentage lease provisions) with the private developer.

Example of a privately financed people moving serving large multi-use complex. Public sector role to date has been negligible.

1/ AMRA, op.cit.; Gladstone Associates Project Files.

2/ Project description, Ford Motor Land Development Corporation; Gladstone Associates Project Files.

Source: Above and Gladstone Associates.

Joint Development Opportunities

As suggested by the above broad definition and the North American experience to date, joint development may be a means to multiple public objectives, even when it is not actively promoted by government. The most important opportunities are enumerated below, including potential benefits of both a financial and non-financial nature. The objectives appropriate for any situation will vary according to local conditions, the type of transit improvement and associated benefits, the costs entailed to encourage joint development as well as public and private resources available at the time. Correspondingly, there are a range of joint development strategies from the public sector's standpoint, extending from:

- "Passive development strategy" with no special effort by local government to guide, much less control joint development, to
- "Seed development strategy" providing key public improvements and possibly zoning or other incentives to trigger desired private development, to
- "Active development strategy" which attempts large scale redevelopment by using a public development corporation or the city's renewal agency.

All of these have been employed at one time or another in various projects previously discussed. The appropriateness of such strategies for any given situation, of course, will require a case-by-case determination, including consideration of such public objectives as the following.

Increased Transit Ridership

Joint development can induce the utilization of transport improvements, especially where it results in relatively large-scale (e.g. 100,000 + s.f.) real estate projects with several uses such as offices, shops and housing by:

- generating substantial travel demand, which in large scale projects can total into tens of thousands of person trips per day;
- concentrating development into high density buildings, instead of dispersing it into scattered structures; and
- spreading travel demand throughout periods of transit services rather than concentrating patronage during peak hours.

Conversely, inadequate supporting facilities (e.g. parking areas at outlying stations), transit station area design deficiencies (e.g. absence of adequate circulation systems) or land use policies which preclude intensive development (e.g. down-zoning around station stops) can result in ridership losses, and attendant drops in farebox revenues.

Assistance in Transit Financing

Joint development can provide assistance in financing both transit and related facility requirements. In San Francisco, for example, the \$29 million Embarcadero Center station was financed through a combination of non-BART resources, ranging from tax increment financing (\$13 million in bonds) to funds transferred from the proposed West Portal Muni Station (\$16 million). Related street level improvements were funded from a \$24.5 million General Obligation Bond, with major adjacent development financed by private capital on urban renewal land. Revenues from the leasing and sale of real property can be another source of funds for capital improvements, as shown earlier for the Toronto subway.

Fiscal Support for Local Government

Depending on regional economic trends and related market and financial factors in the station area, joint development can broaden the tax base for certain communities, particularly when real estate projects involve retail and office space and other commercial activities which characteristically produce a strong positive fiscal impact. The extent of fiscal support will depend on whether net new development can be attracted to the locality as distinct from being redistributed within its boundaries. In addition, a critical issue in some communities is not simply whether development takes place within "city limits" but whether it takes place in conformance with the locality's land use and transportation plans.

Increased Opportunities for Local Residents

Further, joint development can provide increased opportunities for local residents by creating residential, retail and commercial employment openings. Projects involving public agencies may provide schools, health care or law enforcement services for area residents, as well as parks and recreational facilities. Likewise, joint development can help create community support for

transport improvements. Replacement housing through joint development is one example of compensation which can be provided to affected residents, businesses and institutions in the area. Improvements in transit station planning can also be used to reduce the opposition of local communities, the redesign of the Berkeley BART station and undergrounding of the transit line being one example.

Improved Land Use and Urban Environment

Finally, joint development can provide improvements in station areas, adjacent land use, and the urban environment. Within station areas improvements can include comfortable, safe and convenient pedestrian circulation systems from transit to various destinations in the immediate surroundings. Areas adjacent to the stations may need coordinated local parking programs and related street improvements. Likewise, new building complexes can be constructed with a coordinated design in order to interface efficiently with transport facilities. Under certain conditions, existing undesirable land uses may be eliminated. For the metropolis as a whole there is also the possibility of reshaping the region around large-scale, high density, multi-use development, as illustrated by the Canadian experience in Toronto and Montreal (see foregoing exhibits). There may be reason to think as well that such results could be realized with significant cost savings, in terms of reductions in urban infrastructure requirements and per capita city expenditures for public services.

Joint Development Constraints

In view of these potential advantages, why have so few significant joint development projects been completed to date? Review of the experience thus far suggests a dozen key factors that can hamper transit-related joint development, as summarized in Exhibit 3.6 on the following page. They are grouped for convenience into four broad categories:

- Planning and policy related: fundamental values of society that shape the possibility of public action in joint development;
- National program factors: legislated and department (DOT or other federal agencies) rules and regulations within which local transit entities typically work;

- Local program factors: factors largely within the control of local entities (or at least their State governments), and which include many critical planning and implementation decisions -- route alignment, station location, for example; and
- Local development factors: at "micro" or site-specific level, including market conditions, availability of zoning, prevailing land ownership patterns and so forth.

By and large, only the last two sets of factors are subject to some degree of local control.

Exhibit 3.6 SUMMARY OF CONSTRAINTS AFFECTING JOINT DEVELOPMENT

<u>Constraint</u>	<u>Comment</u>
<u>Planning and Policy Related</u>	
Desirable Type of Urban Development	Local governments must decide if they want to encourage large-scale, high-density projects. If so, they might use transit as a key instrument in facilitating this policy, by focusing their growth, and evaluating whether or not existing arrangements enable developers to take advantage of land value impacts associated with major transit arteries. Otherwise, only a small fraction of the possible growth will occur in the form.
Desirable Type of Urban Transportation	At the moment, the auto is the mode of transportation most relied on, and increasing numbers of them have been registered in recent years. This has helped to disperse population and employment over wider areas. It appears unlikely that the U.S. will use rail or transit facilities to reverse this trend, however. Does the local government intend to support a transit system and enable it to operate viably? If so, other policies and assumptions about its area's transportation (e.g. parking) have to be re-examined.
Future Implications for Finance and Development	Local governments will have to determine what economic gains they are willing to leave in the hands of developers. Do they want to recapture spillovers into the public treasury? This practice might prove adverse to successful joint development projects; and it is possible developers might want assurance that such practices would not be implemented. There is a trade-off involved here between policies to augment the public's finances and policies to encourage joint development.
Future Implications for the Direction of Urban Growth	Transit systems could either be reactive or anticipatory. The former involves minimal front-end investment and essentially follows the direction of urban growth. The latter requires a greater degree of initial investment (but lower long-run costs), and involves extending transit to vacant areas before there is pressure for such extensions. It would necessitate increased planning and a greater degree of control for urban growth.

SUMMARY OF CONSTRAINTS AFFECTING JOINT DEVELOPMENT (cont'd)

<u>Constraint</u>	<u>Comment</u>
<u>Planning and Policy Related</u>	
Future Implications for Costs	By any measure, a policy of encouraging joint development increases public sector costs, which must also be factored in to any decision.
<u>National Program-Related</u>	
Restrictions in Use of Federal Funds	Until recently, UMTA capital grants for planning and land acquisition were limited to properties directly needed for transit system development. Thus, while large sums of money were expended to develop the transit system, federal funds were not available for either supplemental land acquisition or other forms of joint development assistance. (For recent changes, however, see factor below.)
Lack of Federal Sponsor	There has been no comprehensive federal effort either in terms of policy or financial commitment, to significant joint development projects. There are no guidelines for the use of UMTA funds in this regard, and federal urban renewal funds were restricted to areas designated as blighted (a restriction which typically precluded areas with strong market potentials). However, federal policy has become somewhat more supportive through the passage of the Young Amendment to the Urban Mass Transportation Act. It permits support for development corporations and the use of federal funds to acquire and improve facilities within the entire transport zone.
<u>Local Program-Related</u>	
Limited Powers of Transit Entities	Transit authorities are usually single-purpose agencies limited to powers granted by State legislation. Their legislative mandate is typically transportation development and management alone, which limits their planning to technical and engineering considerations. They do not have power to regulate land uses beyond the boundaries of land required for right-of-way and station development nor can they require land in excess of the amount needed for transportation purposes.

SUMMARY OF CONSTRAINTS AFFECTING JOINT DEVELOPMENT (cont'd)

<u>Constraint</u>	<u>Comment</u>
<u>Local Program-Related</u>	
Local Government Fragmentation	Generally no single agency has the comprehensive authority to permit planning, financing, and implementing development around transportation facilities. In most instances, several local agencies and autonomous organizations exert control over transportation and land use development. This may include transit authorities the state department of transportation, metropolitan planning organization, community development agency, zoning commission, city planning department, and the city legislature and executive branches. Powers, responsibilities, interests, and constituencies for this welter of organizations differ, overlap, and frequently compete.
Legal Constraints	Fundamental restrictions exist on public involvement in the real estate development process (e.g. with respect to the use of excess condemnation). Legal precedent is not firmly established in this field, although there has been some experience in related fields such as urban renewal and highway and port development.
Fiscal Constraints	A deepening fiscal crunch afflicts transit system development operations today. Symptoms of it are default on bond repayments, cutbacks in service and rethinking system expansion plans. Scarce fiscal resources are allocated to immediate needs in this crisis atmosphere, and joint development takes a back seat to bond repayment, operating deficits, and system completion.
Limited Expertise in Real Estate	Local governments are typically not experienced in real estate development, and do not have the expertise necessary to successfully engage in real estate ventures. They are further hampered by legal and bureaucratic regulations that place local government at a competitive disadvantage in the market place.

SUMMARY OF CONSTRAINTS AFFECTING JOINT DEVELOPMENT (cont'd)

<u>Constraint</u>	<u>Comment</u>
<u>Site Specific</u>	
Lack of Adequate Market Support	Real estate markets may be sufficient to support significant development surrounding a transit station at only a limited number of sites.
Lack of Appropriate Zoning	Even given adequate market support, development cannot take place without appropriate zoning. Local community interests may resist additional development by opposing up-zoning, and supporting down-zoning, thereby negating joint development opportunities.
Multiple Ownership of Land	Deep, narrow lots with multiple owners that are found in many central cities may need substantial time and cost to assemble. Owners that hold out for more money or refuse to cooperate are an added threat to the economically successful completion of the project.
Changing Market Conditions	Over a 15-20 year period, important trends in land-use markets, employment and population may change, all of which bear on the joint development project. The project itself may require 5-10 years for completion, and should be seen in that context. Local entities can manage that market by being flexible about the type of development going on near station areas, and allowing the developer to adapt to these changing conditions.
Local Costs to the Developer	Many localities are subject to costs that substantially affect the developer, and the project. Among these are the property tax rate, the assessment ratio, income taxes or commuter taxes. Changes in them may lead to changes in the development plan and substantially alter the degree to which the developer's financial objectives can be realized.

Literature on Joint Development

Literature on the subject of joint development is extensive, and has been dominated by highway-related joint development until the last few years. Such a report was that of Daniel, Mann, Johnson and Mendenhall, Valuation of Air Space. Recently, though, there has been a growing interest in policies and procedures for implementing joint development around transit stations, as evidenced in such important studies as the report of the National League of Cities, Transit Station Joint Development (1973) and AMRA/OMP'D's Transit Station Area Joint Development (1976). Likewise interest in the development industry has begun to blossom, as suggested by a ULI Transportation Task force reported in a 1974 article "Development Policies for Urban Mass Transit Station Areas." Members of this ULI group are prominent in the fields of urban planning, financing and development. Currently, the Urban Land Institute is working with Gladstone Associates under an UMTA grant on a casebook of prominent joint development projects in this country and Canada. This study is documenting a range of joint development projects, as well as the planning, financing, and implementation issues involved with a special focus on how "deals" between public and private sectors are structured and negotiated in each case.

Following a chapter devoted entirely to value capture, a number of these recent developments will be reviewed in the context of Land Use Regulation (Chapter 5), Taxes, Assessment, and Charges (Chapter 6), and Public Land Acquisition (Chapter 7).

KEY JOINT DEVELOPMENT LITERATURE

Administration and Management Research Association and Offices of Midtown Planning and Development, Office of the Mayor, City of New York. Transit Station Area Joint Development: Strategies for Implementation Executive Summary and Final Report (prepared for the U.S. Department of Transportation). 1976. A major research report which analyzes the impact of transit systems on property values, techniques for implementation, alternative institutional policies and organizational forms and attendant implications for the federal role. Constraints on joint development are also discussed: poor station location, multiple ownership of land and inadequate interagency coordination. Six possible objectives of joint development — value capture, encouragement of development, property assemblage, community preservation, land use control and design control — are detailed. Case studies of large and small scale joint development are detailed.

Daniel, Mann, Johnson & Mendenhall. Valuation of Air Space (National Cooperative Highway Research Program Report 142). Washington: Highway Research Board, 1973. Advantages, disadvantages, guidelines, procedures and examples of valuation related to air space are discussed. One conclusion: widespread use of joint development in highway planning and acquisition of rights-of-way is probably not feasible in most urban areas. Criteria for planning and case studies are given.

Highway Research Board. Joint Development and Multiple Use of Transportation Rights-of-Way. (Special Report 104, proceedings of a conference held November 14-18, 1968). Washington, D.C., 1969. Objectives of increased joint development and multiple use are: decreasing costs of rights-of-way, reducing transportation demand and reduced competition in the allocation of urban land. Constraints are discussed as well.

Highway Research Board. Multiple Use of Lands within Highway Rights-of-Way. (National Highway Research Program Report 53). Washington, D.C., 1968. A summary of existing multiple uses being made of highway rights-of-way. Examples are evaluated in terms of safety, traffic operations, aesthetics and other considerations. Potential new uses are also discussed.

National League of Cities and U.S. Conference of Mayors, Skidmore, Owings and Merrill and Development Research Associates. Transit Station Joint Development (report prepared for the U.S. Department of Transportation and the U.S. Department of Housing and Urban Development). Washington, D.C., 1973. A comprehensive survey of problems and opportunities as regards coordinated urban development around 40 transit station sites in the San Francisco Bay area, Chicago, Boston, Los Angeles, Buffalo, New York and Washington, D.C. Three detailed analyses of sites in Oakland, Chicago and New York are provided. Included in these analyses are planning guidelines and draft applications to UMTA for joint development planning funding.

Real Estate Research Corporation, in cooperation with the U.S. Department of Transportation. Air Rights and Highways. (Urban Land Institute Technical Bulletin 64). Washington, D.C., 1969. A nationwide inventory based on the California experience of air space projects across the country, and an analysis of ownership factors, construction methods and costs, property values and legal authority. Recommendations of the study include the creation of a state authority to deal with air space development and the coordination of general planning.

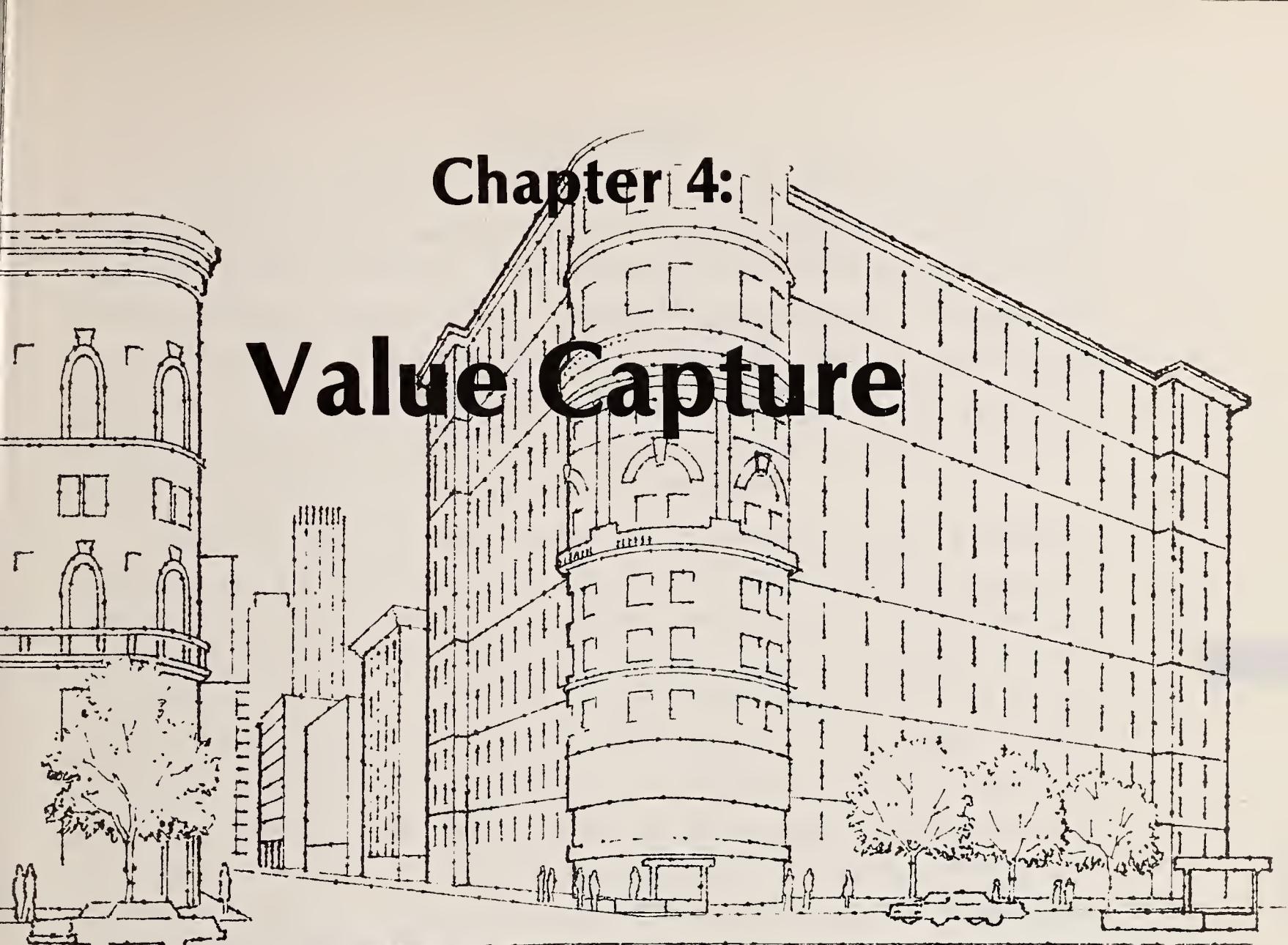
Real Estate Research Corporation. Joint Development: Center City Transportation Project (prepared for the U.S. Department of Transportation). 1970. An early overview and summary of the state of the art in joint development. Discusses institutional constraints in achieving transportation improvements. Alternative organizational forms are explored in relation to identified institutional problems of public transportation. One of six guideline studies in the Center City Transportation Project, a city-based program sponsored by the Urban Mass Transportation Administration.

Rivkin Associates, Inc. Acquisition of Land for Joint Highway and Community Development: Task A: Conceptual Framework and Inventory; and Findings, Conclusions, Recommendations and Synthesis of Project Reports (draft; prepared for the U.S. Department of Transportation). November 1975 and July 1976. An extensive exploration of expanded land acquisition expressly as used to achieve joint development objectives. Seven case studies are detailed in the first volume; and nine projects are inventoried in the second.

Rice Center for Community Design and Research. Built or Imminent U.S. Examples of Value Capture/Joint Development. 1976. A nationwide survey of projects resulting in 10 case studies in concise, outline form. Projects discussed include: Bankers Trust Building (New York City), Embarcadero BART Station (San Francisco) and Lafayette Place (Boston).

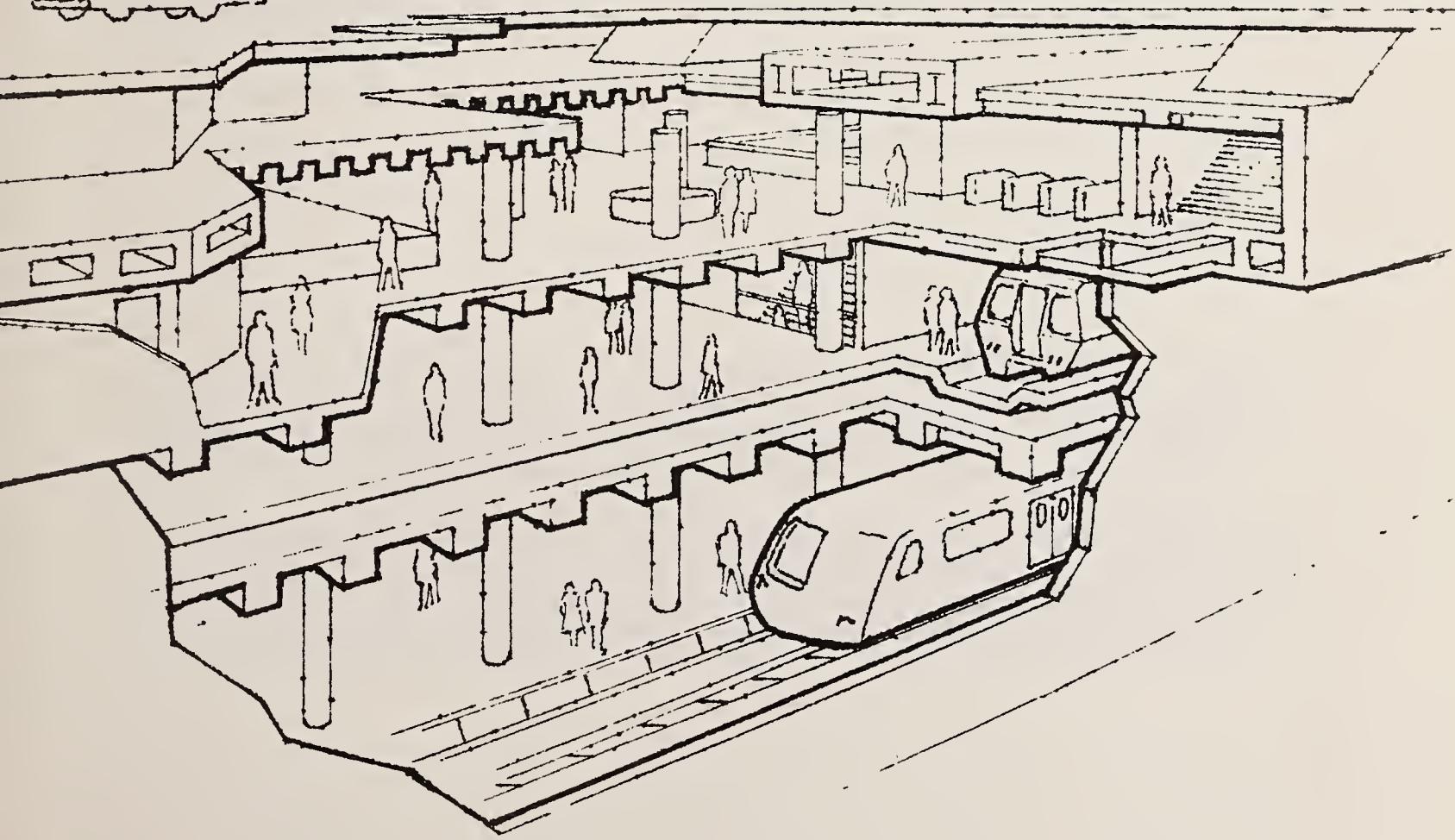
Rice Center for Community Design and Research. Value Capture and Joint Development Applications: Los Angeles, Louisville, Chicago. (prepared for the U.S. Department of Transportation), 1976. Explanation of value capture opportunities in three urban settings. Describes a set of value capture techniques in hypothetical development situations in existing or proposed transit systems. Value capture techniques considered include ad valorem taxation, special district taxation, marginal value-incremental taxation, develop/hold new property, develop/sell real property, hold/sell real property, lease real property, and participation in income from real property.

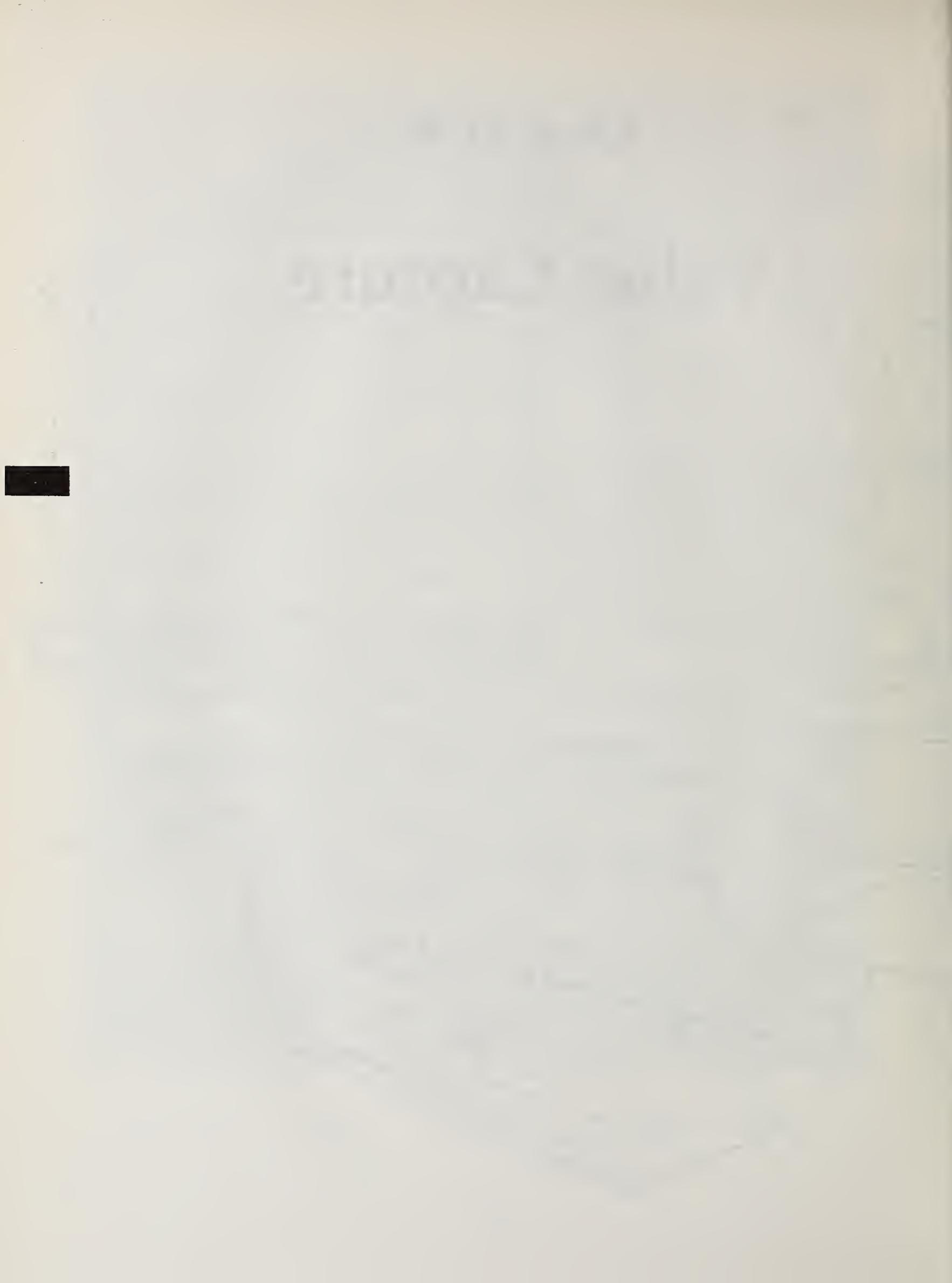
Urban Land Institute Transportation Task Force. "Development Policies for Urban Mass Transit Station Areas," in Urban Land 33(9): 3-10, 1974. A review and policy statement on transit-related joint development. Discusses opportunities for adapting land-use patterns through the construction of extensive rail mass transit systems.



Chapter 4:

Value Capture





VALUE CAPTURE

In the U.S. and most other countries, mass transit systems are public investments, paid for with taxpayer money. Yet these investments, as will be seen, can have important impacts on city form and function, by affecting the location, physical design and economic success -- including property values -- of new (and to some extent, existing) land development. A prominent issue for public policy, therefore, is whether the authorities who plan and build these systems should take such impacts into account, specifically by seeking to recoup, or "capture" increases in property values which result from transit improvements.

The "value capture" concept has aroused special interest in the U.S. recently, particularly as a possible means of financing transit facilities. Generally, value capture refers to the government's recovering some or all of the increased real estate values resulting from publicly financed improvements. As applied to urban transportation, the idea is that transit can generate increased values on properties adjacent to or served by the improvement, and that since these greater values result from public investment (rather than the property owner's own actions) the public should have the right to some, if not all, of the increased value stemming from its investment.^{1/} Such an approach could aim to increase return on the public's investment in transit, (say) by levying a special tax on real estate value increases resulting from transit.

1/ The value capture concept, of course, could be considered applicable to other public actions, ranging from planning decisions to other types of public investment (e.g. roads, parks, public reclamation projects). For purposes here, however, the primary focus is on capturing value from transit improvements.

In discussing these matters, this chapter does not consider broader issues such as the effects of switching from an orthodox property tax (on land and buildings) to a tax on land alone or the question of an appropriate base. These have been explored in other studies, as cited at the conclusion of this chapter.

In view of value capture's limited success elsewhere in the world, this increased U.S. interest in the idea seems paradoxical. Even in North America, though use of value capture has long been proposed to pay for transit,^{1/} it has been applied only infrequently to finance major capital improvements, such as those associated with a subway system. Moreover, its use in other fields is also rare, except for relatively low cost "local improvements," through special benefit assessment.

This limited experience to date is not surprising, however, when value capture is subjected to close examination. For although the concept offers apparent advantages (e.g. access to an "untapped" source of transit funds, and equity in terms of asking beneficiaries to help pay for system costs), it confronts a number of practical difficulties, ranging from devising a feasible system for tax collection and administration to overcoming potentially potent political opposition. At the same time, some recent research on value capture appears to have been misleading and simplistic, both as to the transit financing potentials of value capture and as to certain complexities of local real estate markets, which must be considered in devising an equitable and effective value capture scheme. Illustratively, even if it is granted that society has the right to some of the "windfalls" created by government action, how does one draw the line between a reasonable profit and a windfall?

Consequently, one implication from analysis in this chapter is that public recapture of real estate values created by transit -- while previously seen as offering considerable promise -- cannot be counted upon as a major source of funds in most communities. Given the values that may be generated by transit, however,

^{1/} Probably, the first major public application in this country was in New York some 75 years ago. Richard J. Solomon of Harvard (who is completing research on the subject) points out that much of the present New York subway system was financed by bonds issued against anticipated fare and property tax revenues supposedly to arise from the transit system's effect on land use. This was made a reality of sorts through massive increases in tax assessments near the lines even before any major development occurred, which may even have inhibited development. In any case, the expected revenues never materialized.

a case can be made for beginning with more modest measures -- by exploiting existing real estate taxes more effectively -- in areas characterized by rapid changes in value. This strategy would start by putting basic assessment and administrative features of the property tax system in proper order. Such steps have already been taken in a few communities (though generally not in a transit context), with good results. These measures would be required in any event for most sophisticated value capture schemes to bear fruit, and could even lead to more ambitious reforms later.

For local officials considering such measures, salient practical concerns may include the following:

- The specific meaning of value capture (e.g. what benefits are captured, how, by whom);
- The economic impacts of transit on adjacent property values, and the extent to which these effects can be predicted for purposes of a value capture program;
- The previous experience with various value capture methods, both in transit and non-transit fields; and
- The financing potentials from value capture, and their significance as a source of funds for transit.

These and similar issues are the subject of this chapter. Their real world complications require an appreciation that is correspondingly complex. The answers presented here are hardly conclusive, but can be clarified through careful analysis. A concluding section of the chapter summarizes certain implications for public policy that arise in the course of analyzing value capture.

Concepts of Value Capture

Before exploring the economic issues, it is important to review various concepts of value capture, as well as certain problems in developing a practical definition. The purpose of this discussion, however, is not to define value capture -- definition will depend on the purpose of analysis, and probably will continue to vary from case to case -- but to trace the evolution of thinking on this subject and comment briefly upon several prominent concepts of value capture. For a more detailed discussion, the reader should consult various studies of the subject, as noted at the end of this chapter.

The idea of value capture -- through levying on real estate value increases resulting from public action -- has long been of theoretical interest to economists, and was implicit in some local taxes for centuries (England since the 1400's, France since the 1500's) and the special benefit assessment technique used by U.S. communities since the late 1600's.^{1/} More recently, the idea has become explicit in several "betterment levies" enacted by Great Britain in the post World War II period. Though success has been mixed with these latter schemes, they continue to be subjects of considerable discussion in the literature of taxation and land economics.

Against this backdrop of continued interest, however, relatively few public authorities in developed countries have systematically attempted to recoup property values resulting from public investment, and fewer still were successful in actually implementing a value capture scheme. Transit applications have been notably small in scope and number. Following a "false start" in New York City at the beginning of this century (i.e. with special benefit assessments to finance the city's subway system), interest in applying the idea to transit investment appears to have waned in this country until around 1970, with the almost simultaneous appearance of two publications suggesting "benefit recapture" as a means of paying

1/ Some writers have traced the first use of special benefit assessment to England, where it was used after the great London fire of 1666. In the U.S. it was used in New York as early as 1691. See Victor Rosewater, Special Assessments: A Study in Municipal Finance (Columbia College, New York: 1898).

for mass transit. ^{1/}

The term "value capture" seems to have been coined even more recently, and brought to national prominence beginning in the early 1970's with a series of studies supported under UMTA's University Research Program. ^{2/} This work was followed by growing interest in the idea among transportation planners and federal officials, along with subsequent studies of the subject, ^{3/} culminating in a one-day national conference on value capture sponsored by UMTA in late 1976. ^{4/}

- 1/ In a January 1970 publication largely devoted to urban transportation and attendant urban development, J.S. Robinson and R.E. Skorpil suggested "five major strategies (which) could be employed to capture a segment of the incremental real estate-related values produced by public investment in rapid transit." See Robinson and Skorpil, "Optional Strategies for Increasing the Return on Transit Investment" Westinghouse Engineer (January 1970), pp. 18-23, and an article on related subjects by G. W. Jernstedt. Around the same time, as part of UMTA's Center City Transportation Project, a similar set of strategies were reviewed for "Benefit-Assessment" and "Land Value Capture." See Arthur D. Little, Inc. Financing Public Transportation, (Report prepared for U.S. Department of Transportation, Urban Mass Transportation Administration: September 1970), pp. 53-55.
- 2/ Rice Center for Community Design + Research, A Value Capture Policy: Introduction (Volume I), Legal (Volume II), Community Enhancement (Volume III), Financial (Volume IV), (Report prepared for the Department of Transportation #DOT-TST-75-82: Washington, 1974).
- 3/ Notably, Administration and Management Research Association and Office of Midtown Planning and Development, Office of the Mayor, City of New York, Transit Station Area Joint Development: Strategies for Implementation (prepared for the U.S. Department of Transportation: 1976).
- 4/ See Rice Center for Community Design + Research, "Digest of Conference Proceedings: Joint Development and Value Capture" (September 1976).

Before examining various definitions of value capture that have evolved during this period, it should be pointed out that the studies to date have employed somewhat differing concepts of value capture, as discussed below. None of the aforementioned research, though, has sought to define real estate values specifically (and hence the commodity being captured), nor to analyze a special tax -- or betterment levy ^{1/} -- on real estate value increases resulting from public actions such as a transit improvement. These opening observations may be particularly relevant for public finance readers, since special taxes on real estate

1/ As shorthand, we will refer to such special taxes generically as a "betterment levy." Broadly, a "betterment" would be any increase in a property's value, other than through action of its owner (e.g. to improve or maintain the property). "Property values" at any point in time could be defined to cover 1) land, 2) existing improvements, 3) new development or any combination of the above. Increases in property values could stem from several sources other than actions of private owners, including:

- actions of private households and firms on nearby parcels, which may affect the property in question (so-called "neighborhood effects");
- general community influences (e.g. growth in urban populations); and
- actions by federal, state or local governments (e.g. construction of a transit improvement).

This latter, to be sure, is of main interest here, though for present purposes the specific source of betterment is of secondary importance.

However, a concrete example of this type of levy is the so-called "betterment tax" used in Great Britain. As noted by Grimes:

"Betterment is any increase in the value of land (including the buildings thereon) arising from central or local government action ... (and) enhancement in the value of property arising from general community influences, such as the growth of urban populations. (Final Report of the Expert Committee on Compensation and Betterment, paragraphs 260 and 276, London 1942.) For completeness, it should be added that actions of private households and firms on other parcels might also affect the parcel in question."

Orville F. Grimes, Jr. "Urban Land Taxes and Land Planning" in Finance and Development, (International Bank for Reconstruction and Development: March, 1975), p. 17.

value increments have been widely suggested by tax experts for decades. Such measures, however, do not appear to have gained attention recently as a means for financing transit during the evolving discussion of value capture. ^{1/}

The "Broad Concept"

Perhaps the most prominent definition is that of Rice Center, which popularized the concept. Value capture is "a means where land adjacent to transportation facilities (in this case, transit stops) is purchased, managed or controlled in order for the public to share in the potential financial and community design benefits from the facilities not otherwise possible." ^{2/} This broad formulation would seem to include the methods covered in this catalog. We have preferred, however, to employ the terms for the financing techniques themselves (e.g. special benefit assessment) for several reasons: first, this is the nomenclature normally used by state and local practitioners; second the term "value capture" has manifold meanings which need to be specified further before analysis can proceed; third, the current uses of this term vary considerably from community to community (among those considering value capture in conjunction with transit

- 1/ For example, Baltimore's value capture application to UMTA (the only thus far to receive a federal commitment) proposes a number of conventional techniques, mainly through the city's urban renewal program (e.g. reliance on existing real estate taxes and sale or lease of real property) but no betterment levies on increments in real estate values. See, City of Baltimore, Value Capture/Transit Joint Development: Demonstration Grant Application of the U.S. Department of Transportation (January 12, 1977).
- 2/ Rice Center for Community Design Research, A Value Capture Policy: Introduction (Volume I), (Report prepared for the Department of Transportation #DOT-TST-75-82: Washington, 1974), p. 1. See also Rice Center, Value Capture and Joint Development Applications: Los Angeles, Louisville, Chicago (report prepared for U.S. Department of Transportation, January, 1976), p. 1.

improvements); and fourth, "value capture" has negative connotations for many private developers, ^{1/} whose investment around transit facilities is usually required to exploit more effectively the full potentials of innovative financing techniques. These connotations, and the potential for confusion between public and private sectors are among the reasons for the apparently less frequent usage of "value capture" terminology these days.

At any rate, Rice Center's definition is really but a starting point for understanding value capture, and tends to be too general for purposes here. For example, the Center's definition covers a broad canvas, with the public (presumably government and the general public) sharing in both community design and financial benefits. Considering the subject of this catalog, financial benefits for government are the primary focus of this chapter. Even within this more restricted analytical framework, however, the mention of "public" raises the matter of which government receives the financial benefits. Conceivably this could be:

- The transit entity, for example, through tax increment financing;
- The general local government, say, through special benefit assessment; 2/
- the federal government, for instance, through the capital gains tax; 3/

- 1/ Some such negative connotations may result from vague uses of value capture, as well as the commonly held view that if value is "captured" for the public sector, it must somehow be "taken" from the private sector. This latter logic is not necessarily valid, however, since value capture is not necessarily a zero-sum game between government and business. Nonetheless, this perception has colored the view of private developers toward value capture.
- 2/ Special benefit assessments, of course, may also be imposed by special districts and, under California law, by transit districts.
- 3/ Or for that matter, federal (or other) taxes on income derived from property rentals.

Depending on the recipient of these financial benefits, the practical implications of value capture differ markedly.

The phrase "not otherwise possible" in Rice Center's definition introduces another element of ambiguity. It begs for a description of existing conditions. For example, the property tax can be (as will be shown further on) an effective value capture method under certain conditions, and is of course ubiquitous. Does the phrase refer, then, to a program for rapid and accurate reassessment of property values, so as to exploit these revenue potentials of the existing property tax? Or does it mean to ignore the property tax completely and concentrate on other methods? The Rice Center studies reviewed in the course of this assignment are not instructive on this subject.

The "Narrow Concept"

Since these reports were written in the early 1970's, a somewhat different -- and narrower -- concept of value capture has been advanced in another study sponsored by UMTA. According to this report:

"Value capture refers to the recapture for public use of the transit-induced values that otherwise accrue to owners of property adjacent to transit improvements. The public share may then be applied to financing either part of the transit system itself or to transit-related improvements." 1/

This definition, in contrast to the Rice Center concept, concentrates specifically on property value increases resulting from transit improvements. The source document does not attempt to define property values specifically, however; and, although a land value tax is identified as a value capture tool, it receives little more than mention in the subject report.

1/ Administration and Management Research Association and Office of Midtown Planning and Development, Office of the Mayor, City of New York, Transit Station Area Joint Development: Strategies for Implementation (prepared for the U.S. Department of Transportation: 1976), p. 10. This study was sponsored by UMTA's Service and Methods Demonstration Division.

Focus for this Chapter

The following discussion concentrates primarily on value capture schemes which seek to recapture for government the increased property values produced by public investment for transit. This formulation implies priority attention to the following:

- value capture schemes which seek to raise new revenues for local government as distinct from fiscal transfers of existing resources (e.g. through tax increment financing from general local government to a transit entity 1/); and
- schemes which seek to capture for government the incremental values generated by transit, as distinct from other determinants of property value (e.g. government actions such as zoning, or general socio-economic trends);

Generally, therefore, this chapter concentrates less on the "broad concept" of value capture (e.g. as defined by Rice Center) and more on the "narrow concept" of value capture (e.g. as defined by AMRA).

Several quantitative examples -- of a necessarily approximate nature -- are also introduced in sections following. Their purpose is to introduce "order of magnitude" numerical examples as a guide to discussion. Since a good deal of the transit-impact-on-land-use literature is largely qualitative in nature, even very rough calculations are important in order to gain some quantitative insights into various policy alternatives. As in numerous instances of economic analysis, the magnitude of a proposed change rather than its direction alone is critical. Wherever this is true, and value capture is a case in point, even crude calculations are vastly superior to none.

1/ Since tax increment financing involves no new levies, it does not capture for government any increases in the sense that "value capture" is used here. To consider any fiscal transfer from local government to a transit entity as value capture would open up this latter term to an unmanageably broad definition for purposes of this chapter.

Our experience in previous transit impact studies, and a review of the literature on the subject, yield the following observations on transit impacts specifically associated with fixed guideway systems:

- In terms of impact on regional land use patterns: over the long term, transit acts mainly to reallocate development within a metropolitan area, rather than create new development. Conceivably, transit facilities selectively available to certain metros could provide a comparative advantage to one as against another. However, addition of transit to most North American metropolitan areas is likely to result in only modest relative changes in overall regional efficiency.
- In terms of impact on local property values: transit can produce positive impacts on property values, particularly in areas adjacent to station stops. Generally, however, the role of transit in generating increased property values is relatively modest, compared with other development factors (e.g. real estate markets, land assembly or applicable zoning).
- In terms of predicting transit impacts on property values: empirical studies of this subject are limited, although aggregate increases in property values can be anticipated in certain cases. It is difficult in practice, however, to isolate the impact of transit from other development factors, particularly on a parcel-by-parcel basis.
- In terms of relevance for local government practitioners: the debate as to transit's role in creating new development, albeit a useful point of departure, is more theoretical than real, and needs to be reformulated in more meaningful ways that relate to specific local situations.

1/ Portions of this section draw on recent case studies and a literature search of this subject. Administration and Management Research Association and Office of Midtown Planning and Development, Office of the Mayor, City of New York, Transit Station Area Joint Development: Strategies for Implementation (prepared for the U.S. Department of Transportation: 1976).

However, apart from a few early analyses (e.g. Spengler's classic study of land values in relation to New York city's subway system, cited in Appendix D) and some studies in progress (e.g. the BART Impact Program) astonishingly few "ex post" evaluations have been carried out on an empirical basis as to the impact of transit improvements on land use and land values. The paucity of empirical research here is particularly striking relative to highways, where several hundred such studies have been conducted in the last several decades. True, a large literature exists in the transit field, but the bulk has been based on "ex ante" rather than "ex post": analysis. For further discussion of relevant types of retrospective evaluations, see Appendix D.

Since none of the transit impact issues submit to neat solutions, these observations are discussed at greater length below. For ease of exposition, the subject is treated in several analytical steps, beginning with a definition of transit impact, then exploring the effects of transit on land use and land value respectively.

Nature of Transit Impacts

Unfortunately, the term "transit impact" is used loosely in much of the literature. Accordingly, the logic and sequence of major steps in analyzing transit impacts are worth noting here:

- Define "impact area(s)"
- Establish "before" and "after" indicators, e.g.
 - population and salient socio-economic characteristics (age, income)
 - employment and economic activity
 - fiscal factors (costs and revenues)
 - land use by type (residential, commercial, industrial)
 - community attitudes (survey research)
 - etc.
- Identify time frame for analysis, e.g.
 - route selection
 - detailed planning and design
 - clearance and displacement
 - construction
 - early operation
 - mature operation
- Develop indices of impact (i.e. ratio of changes caused by transit to changes without transit).

Desirably as well, control data would be developed (e.g. through comparison between study and control area, trend analysis), so as to isolate the effect of transit from other factors.

Otherwise stated, "transit impact" refers to effects directly resulting from transit beyond normal trends. It is in this specific sense -- the ratio of changes caused by transit to changes without transit -- that the term transit impact is used in this catalog. A numerical example of this concept, showing transit impacts on

projected office potentials, is set forth in Exhibit 4.1. The exhibit also suggests what might be reasonable orders of magnitude for these effects in a large urban center with a healthy, growing economy. As indicated under "transit impact," the main effect of introducing a fixed guideway system would be to reallocate market potentials within the metropolitan area, rather than to attract new development from outside the region.

Exhibit 4.1 ILLUSTRATIVE OFFICE MARKET POTENTIALS
DEVELOPMENT POTENTIALS AND TRANSIT IMPACT
1980-1985

		<u>Average Annual Absorption</u>
<u>Projections without Transit</u>		
A. Metro Area Market Potentials		3,000,000 s.f.
B. Central Area Market Potentials (Ax33%)		1,000,000 s.f.
C. Impact Area Development Potentials (Bx50%) <u>1/</u>		500,000 s.f.
<u>Projections with Transit</u>		
D. Metro Area Market Potentials		
D.1 Market Potentials Without Transit (A)		3,000,000 s.f.
D.2 Increased Market Potentials Related to Transit (Ax1%) <u>2/</u>		30,000 s.f.
D.3 Subtotal, Metro Area Market Potentials		3,030,000 s.f.
E. Central Area Market Potentials		
E.1 Market Potentials without Transit (B)		1,000,000 s.f.
E.2 Increased Market Potentials Related to Transit <u>3/</u>		180,000 s.f.
-- from "Inside" Metro (Ax5% = 150,000 s.f.)		--
-- from "Outside" Metro (D.2 x 100% = 30,000 s.f.)		--
E.3 Subtotal Central Area Market Potentials		1,180,000 s.f.
F. Impact Area Development Potentials		
F.1 Development Potentials Without Transit (C)		500,000 s.f.
F.2 Increased Development Potentials Related to Transit (E.2x100%) <u>4/</u>		180,000 s.f.
F.3 Subtotal, Impact Area Development Potentials		680,000 s.f.
<u>Transit Impact</u>		
G. On Impact Area Development Potentials (F.3:C)		36%
H. On Central Area Market Potentials (E.2:B)		18%
I. On Metro Area Market Potentials (D.2:A)		1%

Note: In the terminology of market research, "market potential" is the expected total sales of a service or product (e.g. office space, as measured in square feet) over a stated period of time (e.g. per year). "Development potential" is the share, or capture, of the market potential which is possible for a specific area or sites (in this case, downtown locations served by transit).

The illustration above assumes a large urban center (e.g. 2-3 million metropolitan population) with a healthy, growing economy, as reflected by a strong office market, both metro-wide and in the region's central area.

"Metro area" refers to this region, "central area" to the CBD (central business district) and immediately adjacent office locations, and "impact area" to the somewhat smaller zone consisting of sites potentially served by transit. Illustratively, a central area of, say, 20 million square feet of land area (or 460 acres) might have an impact area of perhaps half that size.

"Transit" refers to a fixed guideway system serving the hypothetical central area, which could take the form of, say, the first several-mile segment of a larger system planned for the region or a 2-3 mile DPM (downtown people mover system).

Finally, focus of table is on increased potentials for additional development, rather than improved performance of existing properties (e.g. higher rents, better occupancy ratios and improved property values).

- 1/ Refers to sites potentially served by transit. A 50% capture of the central area's share would correspond to about 17 percent of the metro area's market potentials.
- 2/ Refers to what might be termed "extra-regional" market potentials, consisting of new development attracted from outside the metro area as a result of transit availability. Illustratively, 30,000 s.f. annually could represent a medium sized corporate office or a large-scale association with approximately 150 employees.
- 3/ Refers to capture of both nominal amount of "extra-regional" market potentials and increased share of metro area market potential which had been projected previously without transit.
- 4/ Assumes development potentials are an important variable taken into account by transportation planners in determining transit route alignment(s) and station locations.

The analysis above, of course, is an abstraction from the richness and complexity of reality, since experience has shown that numerous other factors need to be acting in conjunction for transit impacts to occur. Their interaction may be likened to "tumblers in a lock," ^{1/} all of which must be properly aligned at the same time. Transit improvements may create a potential for altering land use and land value, which in turn goes unrealized for years, lacking such a conjunction. However, there can be some substitution possibilities among these contributing factors; for example, a sound local economy and strong land use markets can act to overcome land assembly problems.

A related complexity concerns prevailing public policies toward real estate development, and specific government activities (if any) to attract private investment (and attendant property value increases) around transit facilities. This issue is either ignored or treated much too abstractly in most discussions of the subject. Illustratively, individuals or small citizen groups not visible at the regional scale may have more influence on private investment around transit than the most attractive station area. This is particularly true where local communities oppose new development (and may secure downzoning of a station area to accomplish their objective). Likewise, a variation of only several hundred feet in route alignment or station location can make or break a major development proposal, and consequently affect all related land use decisions that would otherwise "fall into line" thereafter. Further, deliberate initiatives may be required by responsible public agencies to make such development a reality, the Gallery at Market St. East in Philadelphia being a classic case in point. At certain locations and times, these "details" make the difference in land development. Public agencies, as well as the private sector, may have to work very hard to make things happen as desired. At this "micro" level, where most investment decisions are made, there is little inevitable about the business of urban development.

Such considerations begin to illustrate that the debate, "does transit create new development," so popular in academic and professional circles, is more

^{1/} Analogy attributed to Douglas B. Lee, Jr., in Deleuw Cather and Company, "Land Use Impacts of Recent Major Rapid Transit Improvements" (Draft Final Report prepared for U.S. Department of Transportation, Office of the Secretary: 1977).

theoretical than real for local government practitioners. For one thing, transit improvements operate in concert with other factors which together can produce significant impacts. Further, the cumulative effect of these actions in attracting private investment is frequently greater than simply the sum of their parts. Accordingly, a more meaningful question would be, "does transit, along with other relevant factors (e.g. favorable market and financial conditions, appropriate zoning, supporting capital improvements) create new development, beyond normal trends?"

A second oversimplification in the popular debate is to blur the distinction between quantity and quality of development. Otherwise stated, the same quantity of development (say, 500,000 sq.ft. of office space) can produce substantially different impacts on land use, depending on its location (e.g. outlying commercial strips vs. central business district), access (e.g. by highways, transit and/or pedestrian connections), proximity (e.g. to adjacent activity centers, neighboring uses) and other attributes. Likewise, the same scale of development can occasion differing impacts on property values, depending on factors such as above (e.g. concentrating development around "choice" centrally located sites with superior access can generate better quality buildings, higher rents, and greater real estate values than otherwise). Also, the opportunity to realize certain public objectives is usually contingent on the "micro" location and character of development (e.g. can private investment be attracted to a specific area of the city, so as to enhance existing activity centers or even to catalyze revitalization there). More to the point, in other words, would be the question, "can transit, along with other public actions, create better quality development, at desired locations?"

Another issue ignored in the popular debate is that of timing, and specifically the time-value of benefits from desired development, be they in terms of jobs, tax base or a better balance between municipal and costs revenues. The value of these benefits tends to be greater today than, say, ten years from the present, an important concern for local government practitioners in urban economic development. From this perspective, more to the point would be "does transit, along with other public action, hasten the pace of desired development beyond what would have taken place normally?" A related practical question to pose is, "does transit

along with other public actions permit development now that would not be feasible later (e.g. for reasons of escalating construction costs)?" Regrettably, much of the literature ignores these complexities.

Transit Impacts on Land Use

Within a region, transit's role in shaping land use and development is primarily to reallocate normal growth rather than to attract new development (or "extra-regional" potentials in the sense of exhibit 4.1). This role is mainly the result of increased accessibility. For the metropolitan economy, greater ease of movement (i.e. a greater market reach) can reduce costs and lead to growth in existing businesses to some extent, as well as attract a nominal amount of new economic activity to the region.^{1/} These observations, of course, concern long-term effects, rather than short-term impacts such as construction jobs associated with the transit improvement.

At the subregional level (e.g. the central city of a region, or a similarly large-scale community), transit acts both to concentrate normal growth and to attract a greater share of the Metro's market potentials to areas served by transit (see Exhibit 4.1, lines E-1 to E-3). Depending on a variety of factors, the result can range from further centralization of development in CBDs to decentralization of economic activity to outlying areas. Generally, these impacts are more pronounced the closer one moves from the subregional scale above to the grain of "impact areas" along transportation corridors and around transit station areas. A summary of transit impacts at this smaller geographic scale is shown in Exhibit 4.2.

1/ Specifically, some modest increases in total development might be expected -- but have not been documented to date -- in metros served by transit, relative to otherwise similar areas not served. These increases are likely to attend transit availability and resultant improvements in the region's efficiency, lifestyle and economic development potentials. Assuming, for example, two otherwise comparable areas in, say, the middle Atlantic (or other) region, transit availability could be expected to somewhat advantage one at the expense of the other. This reasoning, of course, assumes that metro "A" obtains transit service several years ahead of métro "B"; this advantage, further, would tend to erode over time, particularly as metro "B" is successful in obtaining transit to serve its area (i.e. as it "catches up").

TYPES OF TRANSIT IMPACTS
ON LAND USE AND LAND VALUE

<u>Type of Transit Impact</u>	<u>Illustrative Examples</u>
Improves <u>general accessibility</u> of area served.	Extension of a subway segment links outlying area to nearby sources of employment, housing demand and urban services, and to other activity centers in the metropolitan area, hence contributing to increased land values in the areas served.
Improves <u>specific accessibility</u> of parcels at key points along arteries (otherwise stated: changes relative accessibility among specific parcels), and concentrates development potentials at parcels so served.	Location of key access points around transit stations tends to cluster certain types of high-intensity land uses (e.g. high-rise residential development in outlying areas, high rise commercial or multi-use projects at "close-in" locations), hence contributing to increased land values.
Creates "new" sites with superior accessibility, through air rights development or transfer of development rights to adjacent locations.	Air space associated with transit improvement makes possible large, preassembled sites for development at "choice" locations in high density centers, where land costs are high and land ownership is typically fragmented, hence creating new land values. 1/
Improves <u>internal circulation</u> by linking otherwise dispersed activity centers and functionally related, business operations, and by facilitating year-round movement in all-weather facilities.	DPM (downtown people mover) connects <u>existing</u> office and retail concentrations, hotel/motel to convention center and so forth, and/or provides access to <u>potential</u> activity centers not otherwise feasible for development and/or ties into outlying parking areas. DPM to office development provides both better communication to other office space and elevator-like access to restaurants, stores, and services. DPM to retail development provides tremendously greater visual exposure to passing "traffic". All contribute to increased land values..
Improves <u>environment</u> of area served.	People mover and transit mall relieve traffic congestion and abate air and noise pollution, thus making area more attractive for office workers, shoppers, and (possibly) residents, relative to other locations. Transit improvements also reduce space requirements for streets and parking and make possible better separation of pedestrian and vehicular traffic. All contribute to increased land values.

Note: Refers mainly to transit impacts at the sub-regional scale.

1/ A closely related type of impact concerns transfer of development rights associated with one piece of property (e.g. air space over a transport arterial) to another piece of property, so as to allow the receiving property to be developed more intensively than would otherwise be permitted. A common situation, for instance, is "sale" of air rights over a highway or transit line to allow an adjacent building to have windows overlooking the donor property (a situation that might otherwise not be allowed because of the right of the donor parcel to have a tall building also, which might require a party wall rather than a window wall).

Source: Gladstone Associates.

Closer inspection of these impacts suggests the difficulty of isolating the effect of transit, as distinct from other development factors. As transit improvements are constructed, for example, some districts (such as CBDs) are rezoned to permit greater development densities. The opposite, of course, can and does occur, notably in residential neighborhoods. Such rezonings point up certain complications that arise in attempting to isolate the impact associated with a single factor, in this case transit. It could be argued that zoning, as a regulatory measure of local government, is not actually part of transit's influence on land use; or that zoning was adjusted in response to transit availability; or that zoning provided an incentive to the transit improvement in the first place.

Transit Impacts on Land Value

In recent years, transportation improvements have been built primarily for the benefit of their users.^{1/} Large increases in land value have sometimes ensued (and indeed were a principal objective in the early days of large-scale rail transit construction, when chief promoters were real estate developers and electric power companies). These increases in value have occurred for various types of transportation, including highway interchanges, urban street improvements, and mass transit. Evidence of this may be culled from numerous case studies that have been done in the last two decades. Some have concentrated on the accessibility factor of transportation and its positive correlation with high land values, as in Topeka, Baltimore, Washington and Seattle.^{2/} Others have tried, with mixed success, to measure the increase in value associated with mass transit, particularly

^{1/} In this case, the direct ("user") benefit derived from making a trip is equal to the maximum cost in money, time and effort that the traveller would be willing to "pay" rather than forego making the trip. In any complete economic analysis of transportation alternatives, there may also be indirect benefits (typically termed "non-user" or "external") such as adjacent land-use improvements or a decrease in noise on local streets.

^{2/} See S. Czamanski, "Effects of Public Investments on Urban Land Values," Journal of American Institute of Planners, (July, 1966), H. Brodsky, "Residential Land Improvement Values in a Central City," Land Economics, (August, 1970), and W. Seyfried, "The Centrality of Urban Land Values," Land Economics, (August, 1963).

in the cities of San Francisco, Toronto, and Philadelphia.^{1/} One cannot say that transit will unequivocally produce strong and positive impacts on land value, but other things being equal, there are important reasons for thinking so. Exhibit 4.2, presented earlier, lists types of transit impacts and the way these can operate to increase land value in local areas served by the improvement.

At this "micro" scale, transit impacts on land value -- as distinct from impacts on land use and development^{2/} -- may be triggered by two phenomena:

- First, the transit impacts on land use stemming from the factors identified above; these impacts on land use can generate greater values by improving access, concentrating development around "choice" locations and other reasons (this change might be referred to as a "value increase").
- Second, an additional increment in value (perhaps referred to as a "price increase") which results from interaction among speculators and investors. This activity which serves to bid up the price of properties in areas served, or to be served, by transit.

Some or all of these increases, of course, may be passed onto tenants of the properties in question through higher occupancy costs (e.g. rents).

1/ A.C. Anderson, "The Effect of Rapid Transit on Property Values," Appraisal Journal, Vol. 38. p. 59 (1970). See also D.B. Lee, Jr., et al., Case Studies and Impacts of BART on Prices of Single Family Residences, Vols. III & VI of Land Use and Investment Study, Part III of BART-II: Pre-BART Studies of Environment, Land Use and Retail Sales (Berkeley: Institute of Urban and Regional Development of the University of California, 1973). In addition, there are the works of A. W. Bruce and R. R. Mudge, The Impact of Rapid Transit on Urban Development: The Case of the Philadelphia - Lindenwold High Speed Line, Rand Corporation Paper P-5246 (Santa Monica: The Rand Corporation, 1974). See also D. Boyce, Impact of Rapid Transit on Suburban Residential Property Values and Land Development: Analysis of the Philadelphia Lindenwold High-Speed Line. (Philadelphia: University of Philadelphia Regional Science Department, 1972).

2/ Transit impacts on land use and development are related to, but not identical with, transit impacts on land value. For example, the same level of land development could support different levels of land values, depending on what consumers are willing to pay, which in turn depends on factors such as location, access, proximity to other uses and so forth. A further observation is that, while these comments concern land value, it may be that total real estate, or property, values (i.e. land and improvements) are the more relevant consideration for local government practitioners. This would likely be the case, for example, where public policy objectives include expansion of the local property tax base, revitalization of downtown districts, etc. Where (re)development occurs in un- or under-utilized areas of a city, the increased value of improvements may be much more substantial than increased values associated with the land.

Thus far the discussion has focused primarily on the direction of changes in land values as a result of transit improvements. To illustrate the possible magnitude of these changes, examples are devised for three development situations; two central area and one suburban. Illustrative increases in land values as a result of transit improvements in these three cases are indicated on Exhibit 4.3, page following. These illustrations, as noted in the exhibit, refer to properties immediately served by transit, generally within a radius of one-half mile from the station stop.

ILLUSTRATIVE INCREASES IN LAND VALUES
AS A RESULT OF TRANSIT IMPROVEMENTS

<u>Development Situations</u>	<u>Illustrative Increase Attributable To Transit; Comment</u>
"High cost" central area land, located within (say) a 1,000 ft. radius of transit station; zoned, serviced and otherwise suitable for high density development.	From \$10/s.f. to \$20/s.f. or an impact of about 8% - 12% depending on the cost base (e.g. \$125/s.f.). This order of magnitude would be modest, within the "rounding error" of most land development deals. Commercial (e.g. office and/or retail) development would be most likely in this area, immediately adjacent to the station area.
"Moderate cost" central area land, located within (say) a 2,000-3,000 ft. radius of transit station; zoned, serviced and otherwise suitable for high density development.	From \$4/s.f. to \$6/s.f. or an increase of about 4-6% again depending on the cost base (e.g. \$100/s.f.). This order of magnitude would be minor, with a percentage increase significantly less than (illustratively, about half) the previous example. Lower percentage increase reflects likelihood that development within visual distance of station (as distinct from immediately adjacent) is high-rise residential, with a lower residual land value than comparably dense commercial development.
"Low cost" suburban land, located within (say) a 2,000-3,000 ft. radius of transit station; zoned, serviced and otherwise suitable for moderate density suburban development.	From 40¢/s.f. to 50¢/s.f. or an impact about 50 percent, again depending on the cost base (e.g. \$40,000/acre, or 92¢/s.f.). Although percentage increase is substantially larger than previous illustrations, absolute increase is much smaller since land costs are initially at lower base.

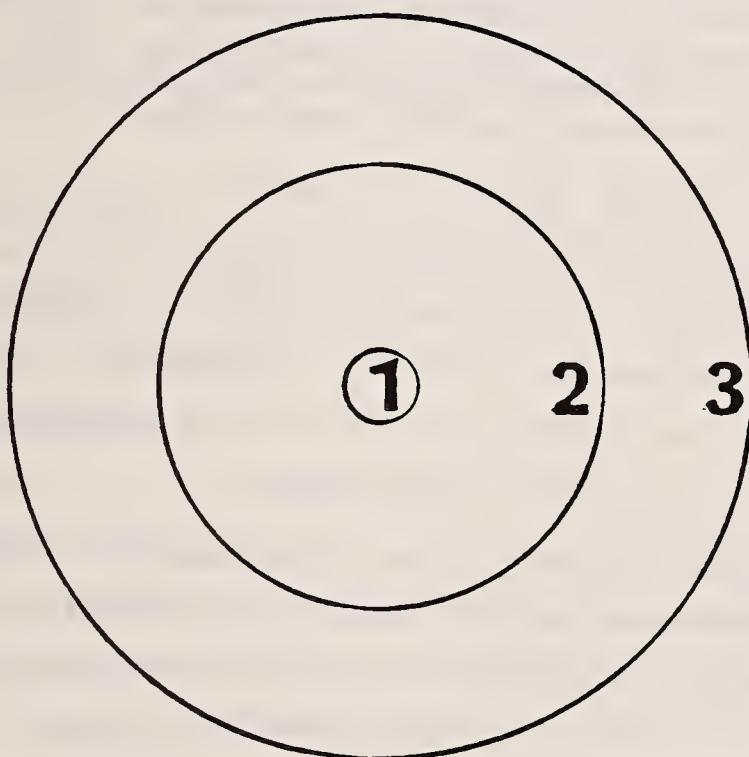
Note: Transit improvement assumed above to be a fixed guideway facility (e.g. conventional rail, LRT or people mover). Land costs shown above are illustrative and vary considerably from one metropolitan area to another and, within a given region, from site to site, depending on specific location, access (from transit and other modes), availability of utilities and rezoning, size and shape of the parcel in question and so forth. The term "land cost" as used here (notably in the table's left-hand column) means average transaction prices which, in aggregate, approximate land values. Total real estate values (i.e. for land and improvements) are also relevant, but only land values are covered in this table.

Source: Gladstone Associates.

As indicated in the previous Exhibit, (4.3), land value increases vary by distance from the transit situation, depicted in the exhibit below.

Exhibit 4.4

ILLUSTRATIVE ZONES
OF TRANSIT IMPACT
AROUND STATION STOP



Note: Area 1 corresponds to zone covered by existing condemnation legislation applicable to a transit situation, area 2 corresponds to an area directly affected by transit investment and area 3 corresponds to land outside the inner rings but within walking distance of transit station. For details, see discussion in text.

Source: Gladstone Associates.

Specifically, land development around transit situation might be roughly grouped into three concentric zones as follows:

- Area 1, which tends to be covered by existing condemnation legislation as land applicable to a transit situation, an area of about 200,000 sq.ft. and some air rights development);
- Area 2, which covers an area directly affected by transit investment, typically with a radius of 1,500 ft. or an area of about 7 million square feet (which could accomodate public facilities and land development directly related to transit functions -- (e.g. parking, retail and office uses); 1/
- And area 3, which consists of land outside the above two rings, but within a convenient walking distance (about 1/2 mile of the station), an area of over 20 million square feet which could accomodate uses less directly dependent on immediate transit access (e.g. high rise apartments, schools, etc.).

Many transit impact studies employ the 2,500 ft. radius rule-of-thumb in designating transit impact areas for purposes of analysis. While this delineation is useful for planning purposes, it should be noted that transit impacts do not vary solely as a function of distance from the facility. Consequently, land value changes over any given area are not necessarily uniform, but are affected by a broad array of other development factors besides transit access.

Land value increases also vary by type of development, as suggested in the above illustrations. High density office, retail and hotel uses tend to be attracted to transit station stops (e.g. areas 1 and 2 above); these uses also support generally higher land values than, say, comparable density residential projects which commonly would be developed further away from stations (say, outside of areas 1 and 2, but within the 1/2 mile radius of area 3). Other uses less compatible with transit (e.g. low density residential or industrial) may experience no increases in value -- or even a decrease in value -- as a result of transit.

1/ Otherwise stated, Areas 1 and 2 amount would amount to about 165 acres; assuming about a third of this land is devoted to streets and other public uses, some 110 acres would be privately owned, a portion of which could be suitable for improvement.

Over a metropolitan area, transit may be expected -- again, there being limited documentation to date -- to have but a small influence on land value increases in the larger region. The major exception concerns cases where transit availability in relatively under-developed regions would trigger a "quantum leap" in economic activity and associated land values. For highly modernized areas, including most SMSA's in this country, transport is already abundant in a number of modes, and rapid transit may only marginally improve access in a city with a well developed highway network -- and hence have a modest impact on land value as well. For example, a recent study which seeks to predict the value of land in Baltimore suggests that aggregate land values in the region will increase by the same amount regardless of the installation of a new subway system.^{1/} Aggregate value increases over the region as a whole, however, may mask important differentials on a subregional scale. Goldberg's comparison of San Francisco and Vancouver from 1930-1950 show that during the highway-building phase in San Francisco land values increased in the city fringes, and decreased in the center city. On the other hand, Vancouver added few highway improvements and experienced a rise in central city land values.^{2/}

Predicting Transit Impacts

Value increases can be predicted to some extent in aggregate terms for transit station areas, but are much more difficult to associate with specific adjacent parcels. Similarly it may be difficult to pin down parcel-specific benefits stemming from transit (as distinct from other factors), if proof is legally required for instituting a value capture scheme.

^{1/} S. Czamanski, "Effects of Public Investments on Urban Land Values," Journal of the American Institute of Planners, (July 1966).

^{2/} M. Goldberg, "Transportation, Urban Land Values, and Rents: A Synthesis", Land Economics, (May 1970). And see also Administration and Management Research Association and Office of Midtown Planning and Development, Office of the Mayor, City of New York, Transit Station Area Joint Development: Strategies for Implementation (prepared for the U.S. Department of Transportation: 1976), p.2.

As previously noted, transit is but one factor affecting property values, and is generally not the primary factor. Both local land use markets (e.g. for residential and commercial development), assembled land at suitable prices, and prevailing public policies (e.g. available zoning, capital improvements) are major influences on the values in question. And to a great extent these other factors must be operating in conjunction with transit improvements to produce significant effects.

Even where transit and these other development factors are working together, impacts on land value are far from uniform. Generally, though, sharp value increases associated with transit typically occur but once, in a "ratchet effect," and then in early stages of the improvement's life cycle (e.g. during construction or early operation of the facility). By way of distinction, other development factors may operate over periods longer than the normal business cycle, causing land values to register "real" increments, or constant dollar appreciation over time.

That such appreciation should occur is in accord with underlying factors influencing values for fixed land supplies, notably land strategically located in or near urban areas. A basic parameter for this value appreciation would be the average "real" rate of productivity gained in the economy over an extended term. Land and other real estate can be expected to participate in these overall productivity gains, together with other factors of production, to some, even though varying, degree.

In fact, however, the actual pattern of value changes is far more complex and varied. Some parcels will not appreciate at all, but instead will depreciate, or suffer real losses in value, with passing time. Other parcels, while appreciating, will do so only at very slow rates, perhaps barely in excess of an inflationary pace. Still others will sharply increase in value due to specific changes in use and other factors affecting value. In most cases, sharp value increases are discontinuous. They tend to occur over a relatively short time span, often preceded and followed by relatively slow rates of change.

In overview, the sharpest rates of value change typically occur in the first conversion of land use from rural or farm to urban uses. (Such increases are similar

to transit's "ratchet effect," described earlier.) This process typically involves development taking place along the leading edge of suburban extension. Values typically increase in suburban areas as established uses mature, as well as intensify. However, as development intensity increases within conventional norms, rates of appreciation tend to decline, stabilizing into a normal pattern. In addition, as urban areas obsolesce, they are exposed to value decline in selected situations, which may in turn be cause for public action.

Value Capture Methods

These value increases can be "captured" by the public sector only with considerable effort, as there are few effective programs which function for this purpose, and still fewer applications to the transit field. Frequently their implementation has been hampered by prevailing social values or existing institutional constraints. Of the methods that can be employed, some are not contingent upon a particular public action (e.g. rezoning) or improvement (e.g. transit); the uniform property tax, for instance, operates "automatically" in this connection under certain conditions.^{1/} Others are designed primarily for different public purposes; land value taxation, for example, is usually advanced on the argument that it would encourage intensive development and redevelopment of vacant and underutilized properties. Thus, the objects of these methods vary, as do the types of value they can recover. Consequently, the extent to which they recoup values resulting from a given public action or improvement remains somewhat conjectural. A summary of these varied methods, drawn from a broad spectrum of government experience in this country and elsewhere, is shown in Exhibit 4.5, page following.

Real Estate Taxation

As suggested by Exhibit 4.5, there are several means by which transit applications of value capture could be achieved within the present tax framework

^{1/} For example, where assessment practices can be improved to track changes in value more promptly, thus resulting in higher real estate taxes than would otherwise be the case. This example is explored subsequently in the chapter.

**Exhibit 4.5 POSSIBLE METHODS FOR CAPTURING INCREASES IN LAND VALUE
 AS CAUSED BY PUBLIC ACTIONS AND/OR IMPROVEMENTS**

1. Uniform Property Tax
Refers to uniform "property" tax rate on two separate types of real estate: a levy on land and a levy on physical improvements and facilities. (State constitutions usually prohibit lower tax rates on land versus improvements, except in Hawaii and Pennsylvania.) Widely used in U.S.
2. Additional Property Tax
Refers to an added tax (usually on land and improvements) levied over a local district served by an improvement. Depending on improvement(s) in question, the geographic scope for such a district can be large (e.g. metropolitan area) or small (e.g. downtown district). Sometimes used in the U.S.
3. Land Value Taxation
Refers to a separate levy on land values apart from the value of any improvements on the site. In practice land value taxation can extend from a "differential" property tax (the term refers to separate tax rates on land and improvements, and allows localities to tax physical improvements at lower rates than vacant land) to a "site-value" tax (which refers to removing the levy on improvements and replacing it with a higher land tax). In both approaches, land is usually assessed for taxation purposes according to the highest and best use possible at its location. Apart from applications in Australia and New Zealand, the few examples in this country are mainly in Hawaii, Pennsylvania and certain special districts in California. Little used in the U.S.
4. Special Benefit Assessment
Refers to a special levy on property in a specified district, in return for public improvements serving the area. Charge is theoretically levied in proportion to benefits received by each parcel, but more commonly is related to a standard such as assessed value of relative frontage. North American applications today are mostly for local improvements, such as streets, sidewalks, sewers and lights. Widely used in the U.S.
5. Preconditions for Development Permission
Refers to conditions, or "exactions," to be met before development permission is granted. From a developer's standpoint, such preconditions could include dedicating or reserving land for public improvements and facilities, providing these improvements and facilities or fees in place of those requirements. Preconditions are usually employed to ensure that the developer installs the physical capital infrastructure needed, some of which may be for public use. Widely used in the U.S.
6. Impact Taxes
Refers to a related family of taxes, designed to raise additional revenue for capital improvements and municipal services needed in an expanding area. Frequently takes the form of a fixed levy imposed on a given unit (e.g. \$X per room or per square foot), paid by the developer, often before construction begins. Can help to pay for public improvements beyond those covered as preconditions for development permission. Little used in the U.S.
7. Betterment Levies
Refers to a related family of taxes that are imposed to recoup the "betterment" or increase in property value, brought about by some public action or improvements. Typically these taxes seek to recoup values beyond the point of cost recovery for the improvement, to capture some of the benefits derived therefrom. Found in England, Canada and Australia. Little used in the U.S. 1/
8. Uthwatt Proposal
Refers to proposals by a British Commission of this name, which concluded there was no practical way to isolate, on a parcel-by-parcel basis, those increases in property value caused by public planning decisions, as distinct from increases caused by other factors. Recommended that the public recapture part of the increase in annual site value of parcels, regardless of the cause except for the landlord's own improvements. This levy would have been at a rate of 75 percent of increases in the annual site value. It would have fallen only on urban areas in Britain, and other sources of betterment recapture would have been discontinued. The exact plan has not been applied, but is related to other betterment-type levies discussed above. Not used in the U.S.

Exhibit 4.5 POSSIBLE METHODS FOR CAPTURING INCREASES IN LAND VALUE
AS CAUSED BY PUBLIC ACTIONS AND/OR IMPROVEMENTS (cont'd)

9. Special Capital and Real Estate Wind-fall Taxes (SCREWTS) Refers to proposal from a recent U.S. research project 2/ to tax increments in real estate value, based on value at the time of specified taxable events, usually sale of a property. Could also cover other types of transfers such as leases, gifts, or development arrangements. (Unlike the Uthwatt proposal, which contemplates taxing on a periodic basis). Would be imposed on increases in value, regardless of the causes of that increase in value. Tax rates could range from 5 percent to 90 percent of the value increment. Similar in concept to the Vermont Tax on Gains from the Sale or Exchange of Land (1973), perhaps the only example in this country. Little used in the U.S.

10. Transfer Taxes Refers to levies imposed when a parcel of real property is conveyed from one owner to another. Usually based on a property's value, less the mortgage assumed by the purchaser. Transfer taxes are often imposed at a flat rate, or may be proportional to either the sale price of the property or the site value. Some states in this country impose these taxes, thus capturing a portion of value increases if property is sold.

11. Sales of Development Permission Refers to proposed revision of the re-zoning process, whereby local governments would sell the right to develop public or private or a combination of both land within its jurisdiction, thus capturing the increased value of certain property available for development. Apparently not employed explicitly in North America or Western Europe, although some local redevelopment authorities in this country have given some consideration to the concept, or use it implicitly in disposing of urban renewal properties to private developers. Little used (at least explicitly) in the U.S.

12. Public Participation in "Deals" Refers to public sector participation in land development "deals" (e.g. through contribution of equity, long term land leasing or extension of loans or loan guarantees) with specific provision for a public share of increased property values. Typically arrived at through negotiation between public and private parties (e.g. using a percentage lease which gears rent to increases in sales per sq.ft. of retail floor area). Sometimes used in the U.S., primarily by renewal authorities or economic development entities.

1/ At least one U.S. application of a betterment levy has been attempted, with respect to recouping value increases resulting from large-scale land reclamation projects financed by the federal government, under a program first enacted by Congress in 1902. Under one provision of the program as amended in 1914, the Secretary of Interior could require project landowners to agree to dispose of all land in excess of 160 acres at a price set by the Secretary. For a variety of reasons, these and subsequent recapture provisions were never implemented.

2/ Hagman and Miszynski, Windfalls for Wipeouts, revised third draft of manuscript (University of Southern California at Los Angeles: July, 1976).

Source: References cited; Gladstone Associates.

of the United States. The first is through the existing uniform property tax, an effective technique if assessment practices are reformed so as to produce a higher revenue yield than would be possible otherwise. The second is through an additional property tax, such as a levy on areas served by transit, with the resulting new revenues dedicated to cover transit costs. This added levy could be applied over a broad area and to both land and improvements, thus having a potentially high revenue yield. It need not, of course, be specifically contingent on demonstrable increases in property values caused by transit. Accordingly, if politically acceptable, an added property tax need not require extensive legal proof of economic benefits, and could be relatively easy to administer as an extension of existing tax procedures.

Public Participation in Development

A public entity could also accomplish value capture by judicious land purchases: acquiring land in advance, then selling or leasing the surplus at the right times. As discussed in Chapter 7, though, this approach requires investment capital by the entity, and faces considerable legal and other constraints in most cases.

Value capture could also be structured as part of land development deals between the public and private sectors. This could be managed, for example, through:

- percentage leases, which gear the amount of rent paid to the economic performance (e.g. gross receipts beyond a certain base) of the commercial venture
- escalation clauses, which adjust the amount of rent paid by some indicator of change in monetary value (e.g. the Consumer Price Index)
- reappraisal clauses, which arrange for rent to be linked to readjustments in property value made through periodic reappraisals.

All of these enable the public to participate in increases of the value of land and/or improvements over time.

Other means for value capture range from conventional special benefit assessments to British-style betterment levies. The former is a common form of

financing for a broad range of capital improvements, such as streets and sewers -- usually to capture for public benefit all or part of publicly provided costs for such improvements -- but its use is limited thus far in a transit context. Betterment levies, such as used in Great Britain, on the other hand, rarely have been applied in the U.S. They either seek to recover for public purposes an increase in property values (land, including the buildings thereon) beyond the point of capital cost recovery, or are basically unrelated to any specific public action or improvement to begin with. Each type of levy is treated below.

Improvement Levies

Improvement levies have long been in existence, and stem from the Roman tradition of civic improvements, where specific local taxes were charged a province for the building of a certain road or aqueduct. This was continued in modified form by the feudal lords of Medieval Europe who taxed their serfs and vassals for the cost of constructing domain roads and canals. However, it is in the cities of France, Italy and Germany during the 15th and 16th centuries that the practice of improvement levies most analogous to those of the present, gained a firm foundation. Such taxes included recovering the cost of paving, extending roads to outlying areas, starting sewer systems, and dredging canals.

More modern examples of improvement levies have evolved in diverse ways abroad. They include the French law of the early 1960's which seeks to make property owners share in the cost of public works. "Self-financing" is another scheme current in Taiwan and Korea, where associations of landowners undertake conversion of land to other uses and install the public facilities required.^{1/}

A common type of improvement levy in the United States is the special benefit assessment, which attempts to place a portion of the financing burden of public improvements on those individuals, groups or properties receiving the greatest benefit from the facility. These special levies are made directly as

^{1/} Orville Grimes, Jr. "Urban Land Taxes and Land Planning," Finance and Development (International Bank for Reconstruction and Development: March, 1975), p. 18.

assessments on the properties served by a new public improvement, or indirectly as fees applied toward the acquisition of additional facilities. These are the improvement levies of most relevance here, and will be returned to in Chapter 5 of this catalog.

Betterment Levies

Betterment levies are particularly associated with Great Britain's tradition of taxation since 1427, when the government first authorized charges to appropriate the increase in land value brought about by street widening and sewer extensions. However, the British tax most widely cited in this connection is the development charge of 1947, which tried to capture 100 percent of the "development value" of land, namely the difference between value in current use and value in the future. Today this tax is generally regarded as a failure, in large part because landowners would not sell unless prices reflected their expectations as to future net worth of the property. Consequently, the supply of land for urban development dwindled. Its replacement, the 1967 Land Commission Levy, at a rate of 40 percent development charge, was apparently somewhat more successful.^{1/} Some other similar forms of taxation have come into use (even if limited) in the United States, Canada and England. These include land value taxation and levies on transfers and land gains. Betterment levies are also in force with varying results in Taiwan, Australia, and India, and have been exacted at a lower percentage of the development charge than would theoretically be expected, so as not to affect adversely the quantity of urban land on the market.

Value Capture Financing Potentials

The financing potentials from value capture can be determined precisely only on a case-by-case basis. Nevertheless, several studies have attempted to arrive at rough, order of magnitude approximations of revenue yields, based on a variety of analytical techniques.

These studies generally concern the "broad concept" of value capture discussed earlier in this chapter, rather than betterment levies on increases in real

^{1/} Orville Grimes, Jr. "Urban Land Taxes and Land Planning," Finance and Development (International Bank for Reconstruction and Development: March 1975), p. 17. This second betterment levy was repeated in 1971. Now there is a third attempt, the "land development tax," enacted in 1976. Lyle C. Fitch reports discussions on the latter with English developers who say this is the worst of the three — that there is no way of calculating its amount in advance of development and that it is seriously impeding private development in England at the present time.

estate values resulting from public actions, including transit. Working with this broad formulation, -- these studies suggest that such revenues can constitute a major source of funds for transit. Generally, they place these financing potentials at 20 to 40 percent, and in some cases up to 100 percent, as compared to the capital costs of transit improvements.^{1/} Our own investigation, reported in Chapter 2 of this catalog, indicates a smaller financing potential, perhaps on the order of 5 to 15 percent of certain system costs.

1/ The initial research reporting on these revenue potentials was Rice Center's, A Value Capture Policy: Introduction (Report #DOT-TST75-82 prepared for the U.S. Department of Transportation: 1974). This study evaluated the revenue potentials from value capture under two alternative transit programs: a "moderate system" costing \$787 million, and another the "extensive system" costing over \$3 billion. Based on a financial analysis, this report concluded:

"...There is every indication that UP TO 100 PERCENT OF THE TOTAL COST OF EITHER ALTERNATIVE HOUSTON SYSTEM CAN BE DEFRAYED BY UTILIZING VALUE CAPTURE POLICY. In order to achieve this 100 percent an Administrative Entity would have to be aggressive both in the type and amounts of land uses which fall under its control as well as in its development process. CONSERVATIVELY THERE IS EVERY INDICATION THAT 20 PERCENT, OR THE ENTIRE LOCAL SHARE FOR MASS TRANSIT DEVELOPMENT, CAN BE DEFRAYED THROUGH VALUE CAPTURE POLICY." (Emphasis as in Rice Center report, p. 21).

The Rice Center formulation of value capture, it will be recalled, is broad and generally includes the innovative financing techniques defined in the present catalog.

Rice Center's later study, Value Capture and Joint Development Applications, January 1976, pp. 8-9, also attributed substantial revenue potentials to value capture. The cases cited there vary widely, some defraying 100-500 percent of the transit segment costs, others defraying substantially less or none at all. This was chalked up to variations of situation and technique. In summarizing the results of this research, the principal investigators concluded: "From our analysis, we estimate that somewhere between 20 and 40 percent of the capital cost of certain public facilities, particularly transit improvements, may be saved by using the value capture concept." See David L. Callies, Carl P. Sharpe, and Donald L. Williams "Value Capture Policy Gives the Public An Added Payoff", Planning (October 1976), p. 22.

Moving from this broad formulation to a more focused definition of the "narrow concept" of value capture, financial potentials are more difficult to pin down for a number of reasons:

1/ continued

Subsequently, in the September, 1976 conference on joint development/value capture, Rice Center's project director for the research stated that work to date demonstrated that immediate opportunities for value capture in 3 to 6 cities ranged from \$.5 to \$1.5 billion (current dollars), over 25 years. Based on a preliminary analysis of selected cities, prospects were reported to vary widely (e.g. Los Angeles-\$150 to \$300 million, Denver-\$87 to 150 million, Houston-\$200 to \$300 million, and Chicago-\$50 to \$150 million). He added that, "these are not the only cities with value capture opportunities, but represent specific, well-researched examples."

Finally, the report by Administration and Management Research Association and Office of Midtown Planning and Development, Office of the Mayor, City of New York, Transit Station Joint Development Strategies for Implementation, 1976, p. 36, also concurs that value capture can serve as a significant source of funding, but comments that the public may have to wait a long time to recoup its investment. Some estimates are also reported by AMRA in its companion volume Economic Case Studies, 1976.

Unfortunately, it is difficult to systematically compare these studies with each other in view of their differing definitions of value capture, or to evaluate some estimates and their relationship to implementation costs (or any other appropriate measure of significance for that matter). Some reports are not clear as to whether reference is to income stream or capitalized value, what is the magnitude of transit investment in question, and what would be the specific techniques to capture such value.

- First, betterment levies have been little used in the world, and nowhere in the United States to our knowledge 1/.
- Second, the organized data on changes in property values in U.S. urban centers are poor in quality and limited in scope, particularly for the sub-regional levels likely to be affected by transit; and
- Third, the studies seeking to link property value increases to transit improvements have produced little empirical documentation to date which would permit estimates of transit-related values changes over small areas on a property-by-property basis.

Consequently, a lack of experience and spotty empirical evidence at present combine to preclude definitive estimates of revenue potentials that might result from a betterment levy under the "narrow concept" of value capture. Moreover, as will be suggested later in this chapter, certain practical problems inherent in administering such a levy are likely to limit revenues in any event to less than their theoretical potential.

A General Illustration

The "narrow concept," nonetheless, may be clarified through several numerical examples. One object of this discussion is to illustrate certain determinants of changes in land values, and to trace these influences through a simplified model of a real estate market. Among the many factors affecting value

1/ Except if one counts conventional benefit assessments, which are not legally classified as taxes, historically have been confined to small-scale improvements and limited areas, and are seldom calculated and allocated based on before and after appraisals of property values.

that might be identified, ^{1/} accessibility and taxes are of most interest here. As a rule, they work in contrary ways. In the following numerical illustrations, accessibility is assumed to be a favorable factor (as is usually the case), hence contributing to a gross land value increment for the property in question. Property reassessment and an attendant rise in real estate taxes for the property, however, can act to somewhat reduce this gross land value increment, down to the level of a net land value increment.

Types of Value Increments (gross vs. net). The purpose of this distinction between gross and net land value increments is to pinpoint the effects of prompt property reassessment and a resulting increase in real estate taxes on land values for the subject property. This distinction is infrequently maintained in discussions of land value changes despite the fact that considerable variations exist as to property reassessment practices and tax administration at any given time or

1/ The following factors in combination largely determine land values in urban areas at any given location:

- Access (automobile, transit, pedestrian)
- Proximity (adjacent activity centers, neighboring uses)
- Vicinity (physical and social conditions)
- Site Attributes (size, shape, topography, vegetation, soils)
- Services (utilities, public facilities and services)
- Land Use Controls (zoning, subdivision regulations, building codes)
- Use Potential (type and quality of use -- e.g. residential, commercial -- and size and timing of markets for same)
- Land Ownership Patterns (availability, assembly and subdivision requirements, if any)
- Supply and Demand (amount of available land with desired characteristics, relative to active demand for such land).

Finally, of course, the costs of using land (including real estate taxes) for the desired purpose (e.g. investment, occupancy, development) is also a determining factor.

place. ^{1/} Also, it should be recognized that the following analysis is simplified in several respects. For one thing, changes in property value are typically recorded only at two times -- when a property is reassessed and/or a transaction (e.g. sale) occurs -- rather than continuously as implied in the model below. Further, changes in land values may not be well reflected, even on these occasions:

- In the case of property reassessment, local tax assessors may not seek to specifically isolate land, as distinct from improvement values, but rather attempt to arrive at an aggregate value for each property.
- In the case of property transactions, the "consideration" can be altered somewhat to accommodate the specific needs of a buyer or seller (e.g. by making sale contingent on a staged take-down of the property, an installment sales contract, or special financing) all of which can affect reported selling prices, relative to compensation absent such special arrangements.

Finally, the real estate market rarely functions as meticulously as implied in the model below. Nonetheless, it is useful to think about the market working in this perfect way for purposes of this analysis.

Types of Reassessment Practices (cyclical vs. continuing). Where property values increase, the financing potentials from standard real estate taxes (and most

^{1/} Generally, the term "land value" refers to one component of average transaction prices for real property which, in aggregate, approximate property values. Unfortunately, however, there are no universal definitions of "value" as applied to specific parcels of real estate. Some economists believe that the value of a property is synonymous with market price, assuming that the price was reached under competitive conditions. Other economists feel that a property has "an intrinsic value" which may vary from the current market price. Even professional appraisers do not always agree on the meaning of value. Some believe that the value of a property is the price that "a willing, knowledgeable buyer would offer and a willing, knowledgeable seller would accept, neither acting under compulsion." Other appraisers take into consideration the terms of the sale and the method and cost of financing. Still others qualify the motives of the buyer and the seller in these terms: "What is the property being purchased for?" This approach stresses that a property's value may vary, depending on whether it is to be sold quickly, held for speculation, or developed. The type of buyer may be categorized as an individual, a corporation, a lending institution, or a governmental entity.

For a more detailed discussion, the reader should consult various books on the subject, as well as the continuing dialogue in relevant professional journals. A useful recent compilation of the latter is contained in American Institute of Real Estate Appraisers, Readings in Real Property Valuation Principles (Ballinger Publishing Company: 1977).

forms of betterment levy, for that matter) are directly dependent on local reassessment practices. These administrative aspects are crucial, both because they have for so long been ignored, and because considerable variations exist from community to community.

Historically, the most common reassessment practice in the U.S. was characterized by massive revaluation efforts, often followed by years of roll copying. A subsequent improvement -- the cyclical approach -- relied on assessors working in one part of the community one year, and another the next, making the rounds (say) every six to ten years. According to a recent survey of assessment practices in several hundred jurisdictions across the country, over half the communities responding still rely on a cyclical program by which properties are reappraised or otherwise adjusted according to a more or less fixed schedule. ^{1/}

In some communities this cyclical approach has been increasingly supplanted by programs involving a more selective allocation of appraisal effort (e.g. using sales ratio studies to identify areas with especially out-of-line assessment levels ^{2/})

- ^{1/} See, International Association of Assessing Officers, Real Property Assessment: A Reference Manual for Assessing Officers (Report prepared for U.S. Department of Housing and Urban Development: 1977). Responses from the survey came from 445 jurisdictions, most of which relied on cyclical reassessment, whereby properties are re-appraised or otherwise adjusted according to a more or less fixed schedule. Of the communities using this cyclical procedure, almost two-thirds reassessed every 5 years or more, and cases of 15 to 20 years between reassessments were not uncommon.
- ^{2/} Sales ratio, or assessment ratio studies are statistical surveys of the relationships between assessments and market values of property in any given area. Proxies for the latter generally include sales prices, although independent "expert" appraisals are sometimes also used. Assuming that sales prices are to serve as market value proxies, the sale of a property assessed at \$60,000 for a price of \$100,000 would result in an assessment ratio of .60.

and applying appraisal resources to those areas. This approach -- relying on annual or continuous reassessment -- is clearly the most suited to capturing increments in property values. To focus on the importance of property reassessment -- for the functioning of either the existing real estate tax or an additional betterment levy -- this distinction between cyclical and continuous reassessment procedures is maintained for purposes of the following illustration.^{1/}

Types of Accounts ("Public" vs. "Private"). A final distinction for present purposes is between "public" accounts (from the standpoint of government) and "private accounts" (from the standpoint of an individual property owner). The "value" of taxes or the property tax base itself is not necessarily the same for these accounts, as will be shown subsequently.

Effects of Reassessment on Residual Values. As an illustration, consider an existing 200,000 square foot office property which experiences a one-time increase (or "ratchet effect") in land value, as a result of transit improvements (say, opening of an adjacent subway stop). This value increment as a result of added accessibility and related transit advantages may be implicit (e.g. extra benefits through use of the property, in the case of owner-occupiers) or explicit (e.g. higher rents in the case of lessors). This example assumes the latter, with an increase in rents by 10 percent, from \$10 per square foot of leasable floor area in the base year to \$10.10 per square foot in the following periods. These increased rentals, in turn, produce higher property values, as shown below.

The economics of this property are displayed in Exhibits 4.6, 4.7 and 4.8. Specifically:

- Exhibit 4.6 shows residual values as of the base year, before rents are raised.
- Exhibit 4.7 shows residual values for the same property, at a later year after the rents are raised, but absent any property reassessment (a key assumption discussed below).

^{1/} In a small number of jurisdictions (notably California and New York), the use of computer-assisted statistical approach has also been introduced for valuing certain types of properties. Generally, these newer methods represent a significant advance over traditional assessment procedures, not only from the standpoint of costs savings, but also items of increasing the accuracy and timeliness of valuations (and potentially, the resulting revenue yields).

- Exhibit 4.8 shows residual values for the same property, at the same later year after the rents are raised, but also after a property reassessment and a resultant increase in real estate taxes.

Essentially, these exhibits set forth a simplified operating income statement before the value increase (year 1, the base) and after the value increase (year 2), the latter under two different assumptions (with and without a property reassessment). The residual values shown there are based on pro forma analysis, a standard tool which is widely used by private developers and property owners to evaluate investment decisions. ^{1/}

As shown in Exhibit 4.7, increased rentals produce a higher residual value, and a gross value increment of \$9.22, relative to the base year. This calculation, again, assumes that real estate taxes (and other operating expenses) remain at base year levels. In contrast, Exhibit 4.8 reflects the economics of this project assuming an accurate property reassessment within 12 months following the base year. In this case, increased rentals produce a somewhat lower residual value, in comparison to Exhibit 4.7, for a net value increment of \$8.49 per square foot. The difference, or \$.73 per square foot (about 8 percent of the gross value increment, in this case), has been captured by local government through prompt reassessment of the property, accompanied by its standard real estate tax. In principle, the market value of this property would be reduced accordingly. ^{2/}

1/ Basically, pro forma analysis is a means of relating anticipated revenues, real estate tax and other operating expenses, together with improvement costs for any income-producing property. As a static analysis, "pro formas" represent the project's economics during a typical year. Residual values refer to all income (or the capitalized value of same) derived from the project above direct costs of production (e.g. labor and capital.)

Although usually used to test project feasibility, pro forma analysis is also a powerful tool which can enable public officials, investors and others in land development to examine the impact of public policies upon urban development, including value capture. For further discussion see Appendix B.

2/ This point can be illustrated from the perspective of a prospective purchaser of this property, who in this case should be willing to pay only \$8.49, not \$9.22 per square foot under the conditions specified in Exhibit 4.8. Otherwise stated, a knowledgeable buyer would capitalize the added real estate taxes and reduce by this amount the offer he would make for the property. In this case, the added real estate taxes, assuming prompt reassessment, would be \$1,520 annually. Assuming this buyer's capitalization rate is 10 percent (reflecting a reasonable return on investment -- based on the buyer's alternate investment possibilities and the risks of purchasing this property), the resulting calculation would be $\$1,520 \div 10\% = \$15,200$. This sum, in turn, corresponds to the difference between residual values in Exhibits 4.7 and 4.8.

Seen from another standpoint, the locality in this case would fully recoup this gross value increment over approximately 12 years on an undiscounted basis. (This calculation would be: .73¢/square foot x 12.6 years = \$9.22/square foot. ^{1/}) Purists, however, might object to terming this value "capture," since at least the net value increment belongs in total to the property owner, by definition. The relevance of this objection may well hinge on whether local officials are interested primarily in value capture (where "value" approximates aggregate market value) or tax revenues (where whether value per se is captured may be a secondary matter, compared to financing potentials).

At any rate, a more accurate method for reflecting the value of tax revenues to government would be to discount added taxes by an appropriate interest rate. (See Exhibit 4.9.)

1/ In concept, this approach to evaluating value capture would be similar to the payback method, a capital budgeting technique sometimes used in private industry to rank competing investment proposals. The payback period is the number of years required to recover the initial investment. Investors using this method usually stipulate a maximum acceptable payback period. If the calculated payback period is less than this maximum, the project is accepted, if more, it is rejected. One problem -- that this method does not account for cash flows after the payback period -- would nonetheless not prevent its use in the public sector as a coarse screening device to indicate which value capture schemes provide revenues the fastest.

SIMPLIFIED INCOME STATEMENT
FOR PROTOTYPICAL OFFICE BUILDING
SHOWING RESIDUAL LAND VALUE AT BASE YEAR

1. Net Operating Income			
A. Annual Gross Income <u>1/</u>		\$ 2,000,000	
B. Less Vacancy and Collection Allowance <u>2/</u>		\$ 100,000	
C. Effective Gross Income		\$ 1,900,000	
D. Less Operating Expenses and Real Estate Taxes <u>3/</u>		\$ 700,000	
E. Net Operating Income		\$ 1,200,000	
2. Residual Values			
A. Economic Value @ 10% Capitalization Rate <u>4/</u>		\$12,000,000	
B. Value of Improvements <u>5/</u>		\$ 9,940,000	
C. Residual Value		\$ 2,060,000	
D. Residual Land Value Per Square Foot <u>6/</u>		\$ 100	

Note: Portrays project's economics in base year, before value increase. Calculations are shown irrespective of how project is financed (i.e. "free and clear"). The vehicle in which it is held, applicable income tax considerations, the amount of equity money invested, etc. Economics of this project are similar to a more detailed prototype developed in Appendix B.

- 1/ Assumes an existing 230,000 gross square foot building with 200,000 square feet of leaseable office space, or an 87 percent building efficiency. Rents at \$10 per square foot.
- 2/ At 5 percent of line 1.A.
- 3/ At \$152,000 for real estate taxes and \$548,000 for other operating expenses (e.g. utilities, cleaning, building management).
- 4/ This capitalization rate is the rate of return considered acceptable for investors. In this case it reflects a weighted average of debt and equity, depending on how the project is financed. For example:

	Percent of Economic Value	Return	Product
Borrowed Capital	80%	9.5	7.6
Equity Capital	20%	12.0	2.4
			<u>10.0</u>

The capital structure (i.e. mix of debt and equity capital) and differing returns for each source are not specified for purposes of present analysis, but are generally implicit in the capitalization rate selected.

- 5/ At slightly over \$43 per square foot, including construction and related non-construction costs.
- 6/ Assumes all residual value applied to land, and a land area for this office building of 20,600 square feet.

Source: Gladstone Associates.

SIMPLIFIED INCOME STATEMENT
FOR PROTOTYPICAL OFFICE BUILDING
SHOWING GROSS VALUE INCREMENT AFTER BASE YEAR

1. Net Operating Income

A. Annual Gross Income ^{1/}	\$ 2,020,000
B. Less Vacancy and Collection Allowance	\$ 101,000
	<hr/>
C. Effective Gross Income	\$ 1,919,000
D. Less Operating Expenses and Real Estate Taxes	\$ 700,000
	<hr/>
E. Net Operating Income	\$ 1,219,000

2. Residual Values

A. Economic Value @ 10% Capitalization Rate	\$12,190,000
B. Value of Improvements	\$ 9,940,000
	<hr/>
C. Residual Value	\$ 2,250,000
D. Residual Land Value Per Square Foot	\$ 109.22
E. Gross Land Value Increment Per Square Foot	\$ 9.22

Note: Assumptions in Exhibit 4.6, unless specified otherwise below.

1/ Assumes lease provisions permit rental rates to be adjusted upward from \$10.00/square foot in base year to \$10.10/square foot.

Source: Gladstone Associates.

SIMPLIFIED INCOME STATEMENT
FOR PROTOTYPICAL OFFICE BUILDING
SHOWING NET VALUE INCREMENT AFTER BASE YEAR

Year 2

1. Net Operating Income

A. Annual Gross Income	\$ 2,020,000
B. Less Vacancy and Collection Allowance	\$ 101,000
	<hr/>
C. Effective Gross Income	\$ 1,919,000
D. Less Operating Expenses and Real Estate Taxes ^{1/}	\$ 701,520
	<hr/>
E. Net Operating Income	\$ 1,217,480

2. Residual Values

A. Economic Value @ 10% Capitalization Rate	\$12,174,800
B. Value of Improvements	\$ 9,940,000
	<hr/>
C. Residual Value	\$ 2,234,800
D. Residual Land Value Per Square Foot	\$ 108.49
E. Net Land Value Increment Per Square Foot	\$ 8.49

Note: Assumptions as in Exhibit 4.6, unless specified otherwise below.

1/ Assumes increase in real estate taxes as a result of annual reassessment, with other operating expenses at base year levels. Differences from base year are as follows:

	<u>Base Year</u>	<u>Year 2</u>	<u>Change</u>
Real Estate Taxes	\$152,000	\$153,520	\$1,520
Other Expenses	\$548,000	\$548,000	-0-
	<hr/>	<hr/>	<hr/>
	\$700,000	\$701,520	\$1,520

Real Estate taxes are calculated at 8 percent of effective gross income.

Source: Gladstone Associates.

VALUE OF ADDED TAX TO GOVERNMENT
UNDER VARIETY OF DISCOUNT RATES
"PUBLIC ACCOUNTS"

<u>Added Annual Real Estate Taxes</u>	<u>Alternate Discount Rates</u>	<u>"Value" of Tax Increment</u> ^{1/}	<u>"Value" Per Square Foot</u> ^{2/}
\$1,520	10%	\$15,200	\$.73
\$1,520	7%	\$21,714	\$1.05
\$1,520	5%	\$30,400	\$1.48

1/ "Value" refers to value of added real estate taxes to local government, which may or may not be the same amount for the property owner, since discount rates may be different. In this case, "value" to government is approximated through a capitalization process (e.g. $\$1,520 \div 7\% = \$21,714$). A more accurate present value calculation, with (say) \$1,520 spread out over 25 years and discounted to present value at a rate of 7%, would produce a somewhat smaller number.

2/ "Value" of tax increment divided by land area of 20,600 square feet for prototypical office building.

Source: Gladstone Associates.

Effects of Differing Discount Rates. As noted in this Exhibit, the "value" to government of added real estate taxes is not necessarily the same as the "value" of the same amount to the property owner, since discount rates may be different. In the first case, where the public sector's discount rate is assumed identical to that of the owner of a prototypical office building, the value of this tax increment is the same for local government and the property owner. In the more likely instance of a government discount rate which is lower than that for business, the value of a tax increment would be higher for government (as shown in the previous Exhibit, assuming discount rates of 7 and 5 percent). As a rule, the discount rate for local government would be lower than a property owner's in this case, to reflect the public sector's generally lower costs for borrowing money and the security that added property tax revenues would provide if used for bond financing.

Effects of Capital Gains Tax. Thus far, this discussion has been primarily in terms of value capture from the standpoint of "public accounts," notably a local government perspective. As illustrated above, however, a property owner's standpoint, that of "private accounts," is not necessarily identical to the government perspective. This point is worth pursuing since it has a bearing on how value capture may affect investment decisions by the private sector.

As noted previously, the existing property tax already captures a portion of an owner's gross value increment, assuming prompt property reassessment and a resulting rise in real estate taxes. Conceivably, this gross value increment could be reduced still further by other government levies, shown in Exhibit 4.10.

As an illustration, this example assumes sale of the property within 12 months after the base year. Using the same project economics as set forth previously, the initial owner would retain \$6.37 of the gross value increment, assuming prompt property reassessment, a resulting rise in real estate taxes, and imposition of a capital gains tax following sale of the property. Thus, the combined effect of the local government's property tax and the federal government's capital gains tax is to "capture" about 30 percent of the gross value increment, ($($.73 + \$2.12) / \$9.22 = 30.9\%$). This cumulative impact may seem significant, from the standpoint of private sector decision-makers (e.g. property owners, investors, developers).

EFFECT OF REAL ESTATE TAX
AND CAPITAL GAINS TAX ON PROPERTY OWNER
"PRIVATE ACCOUNTS"

1. Gross Value Increment Per Square Foot ^{1/}	\$9.22
2. Less Increased Real Estate Taxes ^{2/}	\$.73
3. Net Value Increment Per Square Foot ^{3/}	\$8.49
4. Less Capital Gains Tax on Remaining Value ^{4/}	\$2.12
5. Remaining Value Increment to Original Property Owner, After Sale	<hr/> \$6.37

Note: In calculations shown are per square foot of land area; increased values are assumed to accrue to this land.

- 1/ Gross land value increment per square foot of land area, for prototypical office building after base year. See Exhibit 4.7, line 2.E.
- 2/ Increase in real estate taxes assuming prompt property reassessment. Increased amount of tax = $\$1,520 \div 20,600$ square feet of land area = \$.73/square foot.
- 3/ Assumes net value increment equal to market value, with prospective buyer capitalizing value of added property tax and deducting this from the sale price he would otherwise be willing to pay.
- 4/ Assumes land value in base year equals property owner's cost basis, that applicable tax rate for capital gains in this case is 25 percent, and that capital gains tax following sale of the property occurs within 12 months following the base year.

Source: Gladstone Associates.

Even these effects are not the full story, however. For example, whether additional value capture (say, through a betterment levy) would deter development in a given area would depend on a number of additional factors. These include the incidence of value capture -- through existing taxes or a new levy -- in terms of who (e.g. property owner, tenant or investor) ultimately bears the cost of value captured by government. Illustratively, three types of situations might prevail:

- "tight" real estate markets, which permit property owners to pass along most added costs of value capture levies (e.g. to office tenants, through increases in rent, or others); 1/
- "normal" or properly functioning real estate markets, which permit property owners to pass along some added costs of value capture levies or;
- "loose" real estate markets, which permit property owners to pass along little or none of the added costs of value capture levies.

These real world complications of real estate markets suggest that a satisfactory analysis for value capture should be correspondingly complex. In general, however, data from existing empirical studies are insufficient to support such analysis.

1/ In such market conditions, which prevailed in many U.S. metropolitan areas in the late 1960's and early 1970's, developers and investors in search of land development deals can bid up property prices around "choice" locations. To the extent such conditions prevail and transit station areas are considered "choice," some added costs of an increased value capture levy could also be passed along to investors willing to accept a lower return on investment in exchange for superior (hence less risky) locations. In economic parlance, such conditions are "price inelastic," where elasticity refers to the relationships between price and quantity of a commodity (in this case, developable land). Demand is inelastic where the quantity of land demanded for development changes relatively little regardless of price.

An Analytical Approach To Betterment Levies

From the above analysis, the existing real estate tax emerges as an effective way to capture property value increments under certain conditions, even without a betterment levy. The standard real estate tax, of course, is currently used by most communities and constitutes a major source of local revenues. Further, a system for property assessment and tax administration is already in place, albeit one with substantial room for improvement in most cases.

Hence, a basic question in evaluating a possible betterment levy is whether potential revenues are worth the extra costs. These latter could comprise administrative costs (e.g. isolation of transit impacts from other factors, and reassessment of imputed property values at intervals short enough to capture significant increments) and/or political costs (e.g. overcoming potential opposition from affected property owners in the area). Otherwise stated, does a betterment levy beyond a community's existing tax structure yield revenues sufficiently large to be worth the effort? A related issue is where best to begin: by starting with modest measures (e.g. improvements in certain basic assessment and administrative features of the existing tax system) or by more ambitious reforms (e.g. imposing an additional betterment levy)?

Answers to such questions are situation-specific, of course, but an analytical approach to address the issues -- and arrive at a suitable implementation strategy -- is illustrated in the next section. This approach emphasizes analysis of alternatives "at the margin." Given the existing real estate tax, in other words, what are the added benefits associated with efforts to exploit these revenue potentials more effectively and/or to impose an additional betterment levy on projected increases in property values.

The Metro Center Case

To illustrate this analytical approach a specific example was selected of a transit improvement and anticipated increases in adjacent property values. This example concerns the Metro Center area in Washington, D.C. as of early 1976, at the focal point of that region's mass transit system. Although the materials are

presented primarily for methodological purposes, it is worth noting that the effective tax rate in the District of Columbia -- approaching 2 percent -- is not unusually high for a city of its size and location in the Northeastern United States. ^{1/} It is also of interest that Metro Center was projected to experience the largest increase in land values among over a dozen transit station areas recently surveyed as part of a nation-wide study. ^{2/}

1/ The effective tax rate = official tax rate X assessment ratio. As of 1976, the effective tax rate varied considerably from community to community, as shown below:

<u>Location</u>	<u>Effective Property Tax Per Assessed \$100</u>
District of Columbia	\$1.83
Wilmington, Delaware	\$2.44
Chicago	\$3.52
Boston	\$5.06
Indianapolis	\$3.22
Detroit	\$3.07
Newark	\$5.64
Syracuse	\$3.58
Cincinnati	\$1.45
Philadelphia	\$2.05
Providence	\$2.84
Hartford	\$2.44

An effective tax rate approaching 2 percent would thus be somewhat indicative of many Northeastern U.S. cities such as above, but generally high for some other areas of the country (e.g. the Southwest).

2/ Administration and Management Research Association and Office of Midtown Planning and Development, Office of the Mayor, City of New York, Transit Station Area Joint Development: Strategies for Implementation (prepared for the U.S. Department of Transportation: 1976).

As part of the subject study, existing property values and their prospective increases were reviewed in over a dozen different station areas, 4 cities with a cross-section of urban settings and development conditions. Specifically, the station areas surveyed included a number with favorable development factors, as well as some with stagnant or declining conditions.

To these diverse areas, a standardized approach was applied. According to the source document:

An important step in the methodology is to choose a real estate consultant -- usually an appraiser or economist -- who possesses extensive experience in the analysis of development conditions within a given metropolitan area. Based on his or her own knowledge and that derived from gathering relevant data, the consultant can analyze the development pressures at work around a station, determine the impact of market, assemblage, and zoning constraints, and estimate the total value of land value increases within the station area over the next ten to fifteen years.

Explicitly, steps taken by the consultant include: 1) analysis of land sales within a station area to determine current values and value trends; 2) determination of developer interest in the area in the light of neighborhood conditions, geographic development trends, overall market conditions, etc.; 3) analysis of assemblage activity and associated difficulties; 4) analysis of current zoning restrictions and likely future government zoning policy for the area; 5) estimation of aggregated future land value change based on the above factors and the presence of mass transit.

The methodology attempts to derive only an aggregate figure for land value increases over entire transit station areas. It makes no attempt to attach value increases to specific parcels of property. An aggregate figure is all that is necessary to guide station location decisions or to determine the objectives of value capture policy. Yet it should be recognized that the increased land value estimated for a station area will not be spread evenly throughout that area, but will be concentrated on specific sites where new development occurs.

Further, it may not always be possible to separate out transit-generated land value increases from those due to

other factors since land value increases result from a complex interaction of numerous factors. 1/

Inspection of the case studies themselves 2/ indicates that projected increases in property values, while informed by the methodology outlined above, were essentially judgements by each analyst in question.

Changes in Property Values at Metro Center

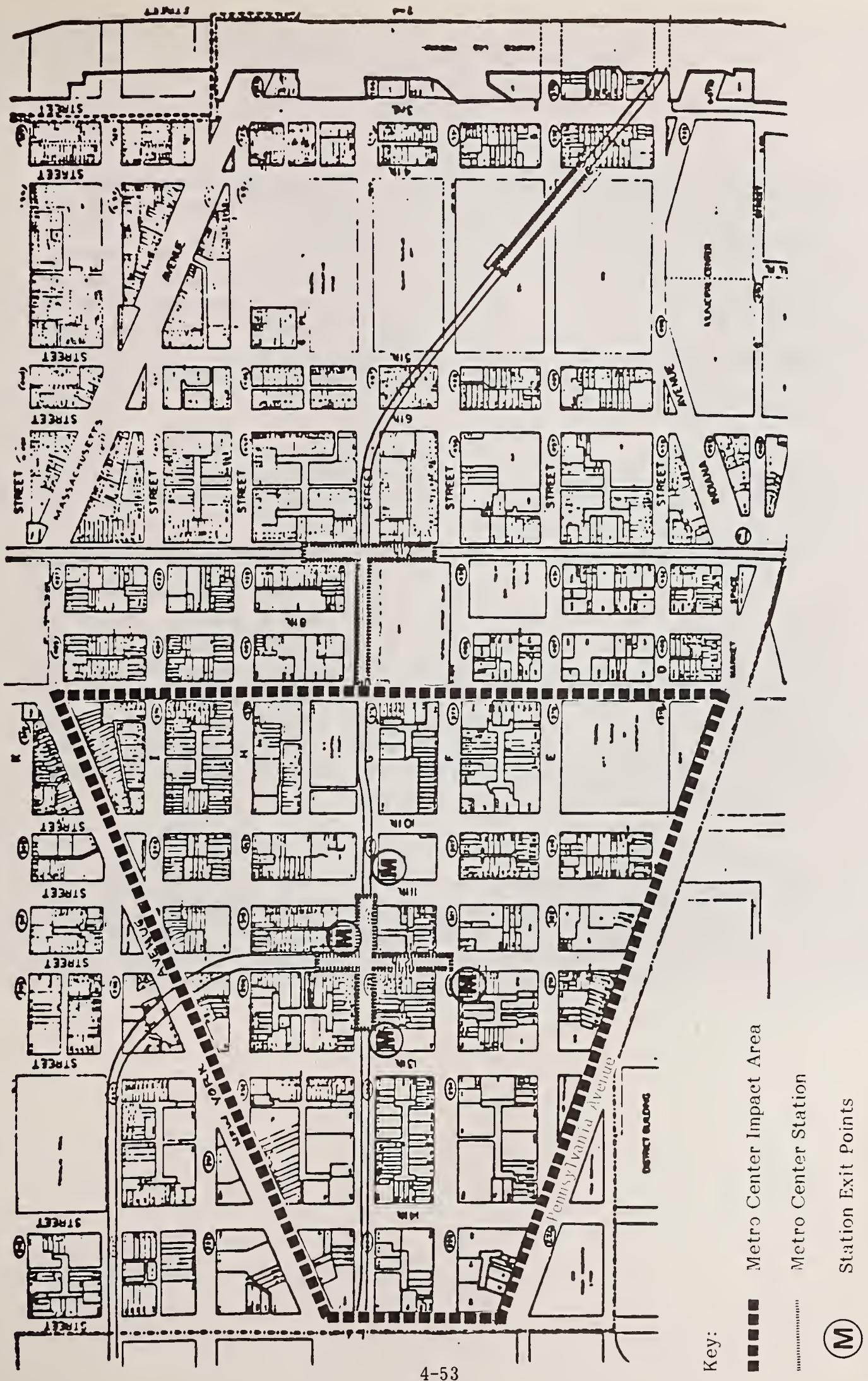
The projected changes in property values, in this case, are for an impact area surrounding Metro Center, a major transfer facility for the Washington, D.C.'s area new regional rail system. Metro Center Station constitutes the specific transit improvement, situated at the convergence of two main subway lines (see Map and Feature Box, page following). The area surrounding this rapid transit station is in the heart of the "old downtown," an office and (now primarily) retail center of Washington, D.C. Though much of the area's vitality has been drained by 20 years of competition from suburban shopping center development and from the diversification of some better quality merchants to the "new downtown" district west of 15th Street, the F street area between 7th and 15th Streets is still a busy shopping street during daytime hours. By and large, however, the impact area has received little private investment or redevelopment over the past several decades, particularly compared to the substantial building boom in other parts of the District's downtown and adjoining frame areas.

The surrounding impact area covers some 24 blocks (approximately 80 acres, excluding public rights-of-way) in the heart of the D.C.'s traditional retailing center, with an estimated market value of \$420 million in early 1976. Exhibit 4.12 displays the projected increase in total land and improvement values over a twelve year period, based on the report referred to above.

- 1/ Administration and Management Research Association of New York City and Office of Mid town Planning and Development, Office of the Mayor, City of New York, Transit Station Area Joint Development: Strategies for Implementation (Final Report: 1976) pp. 30-31.
- 2/ Administration and Management Research Association of New York City and Office of Midtown Planning and Development, Office of the Mayor, City of New York, Economic Case Studies (1976).

Exhibit 4.11

MAP OF METRO CENTER IMPACT AREA



THE METRO CENTER STATION

AS OF EARLY 1976

The Metro Center station extends between 13th and 11th Streets under G Street and between F and G Streets under 12th Street. The station is at the junction of two lines, one running under G Street — the Connecticut Avenue-B & O route, and one running under 12th Street, the Benning-Pentagon route. The latter will connect National Airport with the Robert F. Kennedy Memorial Stadium and will be in operation probably sometime in 1978. The opening of the G Street line between Farragut Square and Rhode Island Avenue is scheduled for March 27, 1976. This line will eventually connect both Rockville and Glenmont in Montgomery County with the downtown area.

The station is a large bi-level structure with four entrances. The design is impressive. Escalators connect the sub-surface station area with the sidewalks above; also, escalators connect the two levels of the station. The G Street platform is the upper of the two levels. WMATA has projected that 186,000 passengers will use the station daily by 1990.

Two of the entrances are in existing buildings: one in the Woodward & Lothrop store at the southeast corner of 11th and G Streets; one in the Homer Building at the southeast corner of 13th and G Streets. The other two stations will become part of buildings to be constructed on what are now vacant sites, one at the southwest corner of the intersection of 12th and F Streets and one at the northeast corner of 12th and G Streets. The latter entrance is part of one of the assembled RLA redevelopment sites. Others of these redevelopment sites will have access to the station through knockout panels at the basement level or levels.

Source: Reynolds & Reynolds, Inc. "Value Impact of the Metro Mass Transit System upon the Metro Centers Station Area", February 1976, contained in AMRA/OMP Economic Case Studies (1976).

CHANGE IN PROPERTY VALUES
METRO CENTER IMPACT AREA
(1976-1988)

	Land Value		Improvement Value		Land and Improvements	
	Total	Per Square Foot ^{2/}	Total	Per Square Foot ^{2/}	Total	Per Square Foot ^{2/}
1976 Estimated	\$368,000,000	\$105	\$ 52,000,000	\$15	\$420,000,000	\$120
1988 Projected ^{1/}	\$441,000,000	\$125	\$179,000,000	\$51	\$620,000,000	\$177
1976-1988 Change Dollar Amount	\$ 73,000,000	\$ 20	\$127,000,000	\$36	\$200,000,000	\$ 57
Percentage Increase over Base Year (1976)		20%	20%	244%	244%	48% 48%

1/ Projections reflect expected development conditions.

2/ Per square foot of ground area.

Source: Reynolds & Reynolds Inc., cited in AMRA/OMP Economic Case Studies.

These projected increases, however, cannot be attributed solely to transit, since a number of other factors can potentially be expected to influence future values within one impact area. These include:

- The proposed \$110 million convention center for Washington, D.C., conceived for development over a 4 block site within the northern portion of the impact area;
- Completion of several large-scale private redevelopments (including the \$60 million Metro Center project) on 5 sites already assembled in the impact area through urban renewal;
- Ambitious plans by the Pennsylvania Avenue Development Corporation, directed at redeveloping the southern part of the impact area (a 20 block district along the northern side of Pennsylvania Avenue, between the Treasury Building and the U.S. Capital ^{1/}), the first phase of which (some \$28 million for land acquisition and initial improvements) was authorized as of 1977; and
- Some or all of the \$40 million "Streets for People" project at the center of the impact area, a first phase of which is already underway.

A number of these projects are noted in the report referred to above, along with the estimate that, over the 12 year period of analysis, perhaps a 19 percent aggregate increase in property values (comprising a rise of about 20 percent for land values and some 13 percent for improvement values) could be attributed to transit.

For purposes of this illustration, it is assumed that the projected increases in property values, as well as the increment attributed to transit, are reasonable. Otherwise stated, the overall increase in the value of land and improvements within the impact area would be on the order of \$200 million, with perhaps \$80 million produced by the public's investment in transit (property value as of 1976 base year = \$420 million x 19%, or \$79.8 million attributable to transit). These increments, again, would be realized over an 80 acre area, between 1976 and 1988.

1/ This district, which substantially overcaps portions of the Metro Center impact area, currently includes public and private land uses which have steadily declined in value, economic viability, and physical condition for many years. The Pennsylvania Avenue Plan proposes that much of the area not in governmental use be redeveloped with new and rehabilitated office space, retail stores and hotels, housing, and extensive physical improvements. Completion of the revitalization program is expected by 1990. See, Pennsylvania Avenue Development Corporation, The Pennsylvania Avenue Plan 1974.

development (or other public) costs. Following this partial analysis, however, some of these issues are reviewed at the conclusion of this chapter.

Existing Real Estate Tax. A first step in this analysis is to ascertain the revenue yield from Washington, D.C.'s existing real estate tax on property value increases in the impact area. To highlight the importance of prompt property reassessment in areas characterized by sharp changes in value, this analysis examines two different conditions. In the first case, an annual or continuous program of property reassessment is assumed, along with a resulting rise in real estate taxes, levied at the existing rate. The result is a revenue yield (present value, 1976), from application of the existing real estate tax rate to transit-related value increments in the impact area, on the order of \$6.0 million (see Exhibits 4.13 and 4.14). Alternatively, a slower cyclical program of property reassessment is assumed (see Exhibit 4.15). In this case the result is a present value revenue yield of \$3.4 million, with the real estate tax revenues being \$2.6 million less ($\$6.0\text{ million} - \$3.4\text{ million} = \2.6 million).

REVENUE YIELD
EXISTING REAL ESTATE PROPERTY TAX ON
VALUE INCREMENTS RESULTING FROM TRANSIT
METRO CENTER IMPACT AREA
WASHINGTON, D.C.

	Millions of Dollars
A. Projected Increase in Property Value, 1976-1988 ^{1/}	\$80.0
B. Increased Revenues from Existing Real Estate Tax, 1976-1988 ^{2/}	\$ 6.0

Note: Revenues are expressed in present value as of 1976.

1/ Assumed increase in the value of land, existing improvements and new construction between 1976 and 1988, attributable to transit, based on Reynolds + Reynolds, Inc. "Value Impact of the Metro Mass Transit System Upon the Metro Center Station Area, Washington, D.C." in AMRA/OMP^D Economic Case Studies (1976). Increase is property value in impact area as of 1976 base year \$420 million X 19% = \$80 million.

2/ See Exhibit 4.14, page following, for detailed breakdown. Refers to present value in 1976 of revenue stream between 1976 and 1988 as a result of property value increments in the impact area attributable to transit. Revenues beyond 1988 are not shown above for several reasons. First, beyond 12 years in the future probably exceeds the fiscal planning time frames of most local governments. Second, aggregate property values for the area after 1988 cannot be assumed constant, and may appreciate or depreciate, depending on a number of factors, including public action. Third, after 12 years the present worth of revenues is less than 42¢ to the dollar, and continues to decrease thereafter. Revenues over this longer period, however, can be calculated from the cited exhibits, if desired.

Source: Gladstone Associates.

REAL ESTATE TAX REVENUESFROM TRANSIT-RELATED INCREASES IN PROPERTY VALUE
ASSUMING PROMPT CONTINUING PROPERTY REASSESSMENTMETRO CENTER IMPACT AREAWASHINGTON, D.C.

(Millions of Dollars)

<u>Year</u>	<u>Increase In Property Value</u> <u>1/</u>	<u>Increase In Assessed Value</u>	<u>Incremental Tax Revenue</u> <u>2/</u>	<u>Present Value Factor</u> <u>3/</u>	<u>Present Value at 1976</u>
1976	-0-	-0-	-0-	1.000	-0-
1977	6.6	6.6	.132	.935	.124
1978	13.3	13.3	.266	.873	.232
1979	19.9	19.9	.398	.816	.325
1980	26.6	26.6	.532	.763	.406
1981	33.3	33.3	.666	.713	.475
1982	39.9	39.9	.798	.666	.532
1983	46.6	46.6	.932	.623	.580
1984	53.5	53.5	1.070	.582	.623
1985	59.9	59.9	1.198	.544	.651
1986	66.6	66.6	1.332	.508	.676
1987	73.3	73.3	1.466	.475	.696
1988	80.0	80.0	1.600	.444	.710
Total	\$80.0	\$80.0	\$10.390	NA	\$6.030

1/ Assumes value increments over property tax base are promptly reflected by annual property reassessment and accrue by equal increments in the years 1976-1988 from zero to \$80 million.

2/ Assumes real property tax at 2 percent of property values.

3/ Assumes discount rate of 7 percent in computing present value at 1976.

Source: Gladstone Associates.

REAL ESTATE TAX REVENUES
FROM TRANSIT-RELATED INCREASES IN PROPERTY VALUE
ASSUMING SLOW, CYCLICAL PROPERTY REASSESSMENT

<u>Year</u>	<u>Increase in Property Value 1/</u>	<u>Increase in Assessed Value 1/</u>	<u>Incremental Tax Revenue 2/</u>	<u>Present Value Factor 3/</u>	<u>Present Value at 1976</u>
1976	-0-	-0-	-0-	1.000	-0-
1977	6.6	-0-	-0-	.935	-0-
1978	13.3	-0-	-0-	.873	-0-
1979	19.9	-0-	-0-	.816	-0-
1980	26.6	-0-	-0-	.763	-0-
1981	33.3	-0-	-0-	.713	-0-
1982	39.9	39.9	.798	.666	.532
1983	46.6	39.9	.798	.623	.497
1984	53.5	39.9	.798	.582	.464
1985	59.9	39.9	.798	.544	.434
1986	66.6	39.9	.798	.508	.405
1987	93.3	39.9	.798	.475	.379
1988	80.0	80.0	1.600	.444	.710
<hr/> Totals	<hr/> \$80.0	<hr/> \$80.0	<hr/> \$6.388	<hr/> NA	<hr/> \$3.421

1/ Assumes value increments over property tax base are reflected by property reassessment every 6 years in the years 1976 - 1988.

2/ Assumes real property tax at 2 percent of property value.

3/ Assumes discount rate of 7 percent in computing present value at 1976.

Source: Gladstone Associates.

Additional Betterment Levy. A second step in this analysis is to review yields from an additional betterment levy, beyond the existing real estate tax. For this purpose, the betterment levy is assumed to be an annual tax equivalent to 4 percent of the \$80 million value increment attributed to transit ($\$80 \text{ million} \times .04 = \3.2 million). Even though the value of individual properties would be theoretically undiminished by such a levy, relative to the 1976 base, a betterment levy assumed at this rate might be considered "stiff" by area property owners, both because it would come to about twice the rate of Washington, D.C.'s existing real estate tax, and because it would apply to the increment value of land and standing improvements. ^{1/} In addition, a betterment levy of this type is unprecedented in the U.S., to our knowledge. ^{2/}

The new value equation can be approximated through a variant of the pro forma financial analysis employed previously. In this case, the simplified income statement has been slightly restructured to focus on:

- the value increment only, rather than the base before transit
- the entire impact area, inclusive of all land and improvements which increase in value as a result of transit, rather than a single prototypical office project.

The purpose of constructing these revised pro formas is to compare values in the Metro Center impact area before and after a betterment levy, so as to establish a basis for estimating revenue yield. Results are shown in Exhibits 4.16 and 4.17, with the betterment levy reducing the residual value of the increment from \$80 million to \$69 million, a drop of 14 percent.

- 1/ The specific effects of such a levy on the economics of a given project could be evaluated through the pro forma analysis technique set forth above (see Exhibit 4.6). These results could then be extended (e.g. with reference to comparable properties elsewhere in the downtown -- but without a betterment levy -- to determine the marketplace implications of such a special tax).
- 2/ Thus, this example also assumes that certain practical problems inherent in administering such a tax can be overcome, a subject returned to at the conclusion of this chapter.

SIMPLIFIED INCOME STATEMENT
FOR METRO CENTER IMPACT AREA
SHOWING NET VALUE INCREMENT AFTER 1976
WITHOUT BETTERMENT LEVY

1. Net Operating Income

A. Annual Gross Income <u>1/</u>	NA
B. Less Vacancy and Collection Allowance <u>1/</u>	NA
C. Effective Gross Income <u>2/</u>	\$13,000,000
D. Less Operating Expenses and Real Estate Taxes <u>3/</u>	<u>\$ 5,000,000</u>
E. Net Operating Income	\$ 8,000,000

2. Residual Values

A. Economic Value @ 10% Capitalization Rate	\$80,000,000
B. Value of New Improvements <u>4/</u>	-0-
C. Residual Value <u>5/</u>	\$80,000,000

Note: Portrays economics of impact area comprising both land and existing improvements, after assumed increase of \$80 million in property value. The exhibit refers to this value increment only assumed to result from transit, specifically construction and operation of the Metro Center subway station.

- 1/ Not necessary to specify for present purposes, but could be derived from income statements for all properties in the impact area.
- 2/ Given a value increment of \$80 million, and operating expenses, real estate taxes and capitalization rate as indicated.
- 3/ Operating expenses at \$3.4 million and real estate taxes at \$1,600,000, the latter equivalent to an effective rate of 2 percent.
- 4/ Assumed not attributable to transit, according to Reynolds + Reynolds, AMRA/OMPД case study.
- 5/ Corresponds to concept of net value increment.

Source: Gladstone Associates.

SIMPLIFIED INCOME STATEMENT
FOR METRO CENTER IMPACT AREA
SHOWING NET VALUE INCREMENT AFTER 1976
WITH BETTERMENT LEVY

1. Net Operating Income

A. Annual Gross Income	NA
B. Less Vacancy and Collection Allowance	NA
C. Effective Gross Income	\$13,000,000
D. Less Operating Expenses, Real Estate Taxes, and Betterment Levy <u>1/</u>	<u>\$ 8,200,000</u>
E. Net Operating Income	\$ 6,900,000

2. Residual Values

A. Economic Value @ 10% Capitalization Rate	\$69,000,000
B. Value of New Improvements	-0-
C. Residual Value	\$69,000,000

Note: Assumptions as in Exhibit 4.16, unless specified otherwise below.

1/ Operating expenses and real estate taxes as previous levels and betterment levy at \$3,200,000, an annual tax equivalent to 4 percent of the value increment before imposition of betterment levy. Computation of the new levy for tax administration purposes could be as a percent of assessed value, as a percent of effective gross income or through a combination of methods. (Determining real estate taxes as a percent of effective gross income, often on the order of 8 to 10 percent is commonly employed for commercial properties in the District of Columbia.)

Source: Gladstone Associates.

Having dimensioned these changes in property values, the revenue yield resulting from this betterment levy can now be determined. For this purpose a present value analysis can be employed, as previously, to more accurately reflect the time value of money. So computed, the present value in 1976 of revenues from this betterment levy would be on the order of \$12.1 million (see Exhibit 4.18, line B).

This is not the full story, however, since revenues from the existing real estate tax on the assumed value increment would decline, given the drop in tax base from \$80 million to \$69 million as a result of the betterment levy. Illustratively, if the tax base (taking account of a betterment levy) as of 1988 were \$11 million less (\$80 million - \$69 million) than otherwise could have been the case, real estate tax revenues "lost" would come to \$220,000 (\$11 million x 2% effective tax rate = \$220,000). To more appropriately account for this decline, however, these changes in value and attendant tax revenues have been spread over time and converted into a present value as of 1976, as compatible with the previous analysis. The resulting net revenue yield comprises revenues from the betterment levy (\$12.1 million) plus revised revenue from the real estate tax (\$6.0 million less \$.8 million in tax revenues "lost" due to the betterment levy = \$5.2 million).^{1/} Total revenues from these two sources, then, would be \$17.3 million.

^{1/} Presumably, real estate taxes would be based on the same type of prompt, continuous property reassessment as required for administration of a betterment levy, the case assumed for purposes of this analysis.

REVENUE YIELDBETTERMENT LEVY AND REVISED REAL ESTATE TAXESVALUE INCREMENTS RESULTING FROM TRANSITMETRO CENTER IMPACT AREAWASHINGTON, D.C.

	<u>Millions of Dollars</u>
A. Projected Transit-Related Increase in Property Value <u>1/</u>	\$80.0
B. Revenue Yield from Betterment Levy, 1976-1988 <u>2/</u>	\$12.1
C. Revenues from Revised Real Estate Tax, 1976-1988 <u>3/</u>	\$ 5.2
D. Total Revenue Yield (B+C)	\$17.3

Note: Revenues are expressed in present value as of 1976.

1/ Assumed attributable to transit improvement, based on Reynolds + Reynolds, Inc., AMRA/OMP Economic Case Studies (1976).

2/ See Exhibit 4.19, page following for detailed breakdown.

3/ See Exhibit 4.20; revenues are decreased relative to what would have been the case with prompt continuing property reassessment but without a betterment levy. The calculation of "cost revenues" would be \$6.0 million (Exhibit 4.13, line B) less \$5.2 million (Exhibit 4.20 = \$800,000).

Source: Gladstone Associates.

REVENUES FROM NEW BETTERMENT LEVY
ON TRANSIT-RELATED INCREASES IN PROPERTY VALUES
METRO CENTER STATION IMPACT AREA
WASHINGTON, D.C.
 (Millions of Dollars)

<u>Year</u>	<u>Increase In Property Value</u> ^{1/}	<u>Betterment Levy Tax Revenue</u> ^{2/}	<u>Present Value Factor</u> ^{3/}	<u>Present Value at 1976</u>
1976	-0-	-0-	1.000	-0-
1977	6.6	\$.264	.935	\$.247
1978	13.3	\$.532	.873	\$.464
1979	19.9	\$.796	.816	\$.650
1980	26.6	\$ 1.064	.763	\$.811
1981	33.3	\$ 1.332	.713	\$.950
1982	39.9	\$ 1.596	.666	\$ 1.063
1983	46.6	\$ 1.864	.623	\$ 1.161
1984	53.5	\$ 2.140	.582	\$ 1.246
1985	59.9	\$ 2.396	.544	\$ 1.303
1986	66.6	\$ 2.664	.508	\$ 1.353
1987	73.3	\$ 2.932	.475	\$ 1.393
1988	<u>80.0</u>	<u>\$ 3.200</u>	<u>.444</u>	<u>\$ 1.421</u>
Totals	NA	\$20.780	NA	\$12.062

1/ Assumes value increments over property tax base, promptly reflected by annual property reassessment, to accrue by equal increments in the years 1976-1988, from zero to \$80 million.

2/ Assumes betterment levy established at amount equal to 4 percent of the increase in property value.

3/ Assumes discount rate of 7 percent in computing present value at 1976.

Source: Gladstone Associates.

REAL ESTATE REVENUES LOST
AS RESULT OF NEW BETTERMENT LEVY
AND ATTENDANT REDUCTION IN TRANSIT-RELATED PROPERTY VALUES
METRO CENTER IMPACT AREA
WASHINGTON, D.C.
 (Millions of Dollars)

<u>Year</u>	<u>Initial Increase in Property Values</u>	<u>1/</u>	<u>Decrease in Property Value</u>	<u>2/</u>	<u>Net Increase In Property Values</u>	<u>3/</u>	<u>Real Estate Tax Revenue</u>	<u>4/</u>	<u>Present Value Factor</u>	<u>Present Value at 1976</u>
1976	-0-		-0-		-0-		-0-		1.000	-0-
1977	\$ 6.6		\$.9		\$ 5.7		\$.113		.935	\$.107
1978	\$13.3		\$ 1.8		\$11.5		\$.230		.873	\$.201
1979	\$19.9		\$ 2.8		\$17.1		\$.342		.816	\$.279
1980	\$26.6		\$ 3.7		\$22.9		\$.458		.763	\$.350
1981	\$33.3		\$ 4.6		\$28.7		\$.574		.713	\$.409
1982	\$39.9		\$ 5.5		\$34.4		\$.688		.666	\$.458
1983	\$46.6		\$ 6.4		\$40.2		\$.804		.623	\$.501
1984	\$53.5		\$ 7.3		\$46.2		\$.924		.582	\$.538
1985	\$59.9		\$ 8.2		\$51.7		\$1.034		.544	\$.563
1986	\$66.6		\$ 9.2		\$57.4		\$1.148		.508	\$.583
1987	\$73.3		\$10.0		\$63.3		\$1.266		.475	\$.601
1988	\$80.0		\$11.0		\$69.0		\$1.380		.444	\$.613
Total	NA		NA		NA		\$8.962		NA	\$5.203

1/ Refers to initial value increment over property tax base, assumed promptly reflected by annual property reassessment, to accrue by equal amounts in the years 1976-1988 from zero to \$80 million.

2/ Refers to subsequent value decrement as a result of new betterment levy (\$80 million - \$69 million = \$11 million, per Exhibits 4.16 and 4.17), assumed to decrease by equal amounts in the years 1976-1988.

3/ Initial value increment less subsequent value decrement.

4/ At 2 percent of net increase in property values.

5/ Assumes discount rate of 7 percent in computing present value at 1976.

Source: Gladstone Associates.

Recap of Revenue Yields. As shown above, increased revenues from transit-related property value increments at Metro Center could stem from two sources:

- First is the existing real estate tax, applied to the increment in property value. This produces more revenues, but the yield depends importantly on property assessment practices. Other things equal, the more prompt and accurate the property reassessment, the more revenues.
- Second is an additional betterment levy, also applied to the increment in property value. This produces its own yield revenue but -- as shown immediately above -- additionally depresses property values, with the result that real estate taxes are reduced. Hence a net revenue yield needs to be calculated, reflecting the increase in revenues from a betterment levy, less the decrease in revenues from real estate taxes.

Two generalizations emerge from this analysis with a bearing on value capture schemes: 1) with betterment levies the decrease in property tax revenues will also need to be considered in computing financing potentials, and 2) any revenue streams projected to result from increases in property values are critically dependent on assessment practices and tax administration.

From the above, one can now examine the revenue yield from these two sources, and how they compare. To this end, three scenarios were structured to illustrate options open to local officials considering a value capture scheme. They are:

- Scenario 1: represents revenues realized without either improvements in property reassessment practices or new taxes on the impact area by local government, assuming property reassessments, are on a slow, cyclical basis; this scenario would produce \$3.4 million (see Exhibit 4.21, line 1) in real estate tax revenues.
- Scenario 2: represents revenues without new taxes on the impact area, but with a program of prompt property reassessment accompanying implementation of the transit improvement; this program would produce an increase in revenues of \$2.6 million, relative to scenario 1 (see Exhibit 4.21, line 2 less line 1).
- Scenario 3: represents revenues though both improvements in property reassessment procedures and new taxes (a betterment levy) on the impact area; increased revenues from this approach would be \$13.9 million, relative to scenario 1 (see Exhibit 4.21, line 3).

Results of this analysis are summarized on the following page.

FROM EXISTING REAL ESTATE TAXES AND ADDITIONAL BETTERMENT LEVY
ON TRANSIT-RELATED INCREASES IN PROPERTY VALUES
METRO CENTER IMPACT AREA

<u>Scenario and Revenue Sources</u>	<u>Revenue Yield</u>
1. Existing Real Estate Tax (slow, cyclical property reassessment)	\$3.4 million ^{1/}
2. Existing Real Estate Tax (prompt, continuing property reassessment)	\$6.0 million ^{2/}
3. Additional Betterment Levy and Revised Real Estate Taxes (prompt, continuing property reassessment)	\$17.3 million ^{3/}

Note: Assumptions as noted in Exhibits 4.13 to 4.18, unless specified otherwise below.

1/ Exhibit 4.15.

2/ Exhibit 4.17.

3/ Exhibit 4.18, Line D (\$12.1 million + \$5.2 million = \$17.3 million).

Source: Gladstone Associates.

These illustrations also demonstrate one reason why analysis of revenue yields requires a case-by-case determination. Specifically, the differences between scenario 1 and scenario 2, in this instance, will depend on existing assessment practices and the extent to which they can be improved. However, the magnitude of revenues from improved assessment practices in this case (\$2.6 million) seems sufficient to suggest that local officials seeking new sources of funds for transit should carefully explore the potentials of exploiting the existing real estate tax more effectively. Such an approach would seem particularly suited for areas served by fixed guideway facilities, where strong markets and other favorable development factors are likely to combine with transit to produce substantial positive impacts on property values.

Moreover, such improvements in assessment practice would afford an added payoff to local government, since greater real estate tax revenues presumably could be reaped from all property improvements in the impact area, not simply those resulting from transit. Indeed, such a strategy -- of starting with improved assessment practices -- suggests other options open to local government (e.g. implementing continuous assessment over the entire Metro Center impact area, so as to access the \$200 million total increase in property values and the ensuing increase in real estate tax revenues). With prompt, continuous assessment, the present value (1976) of these attendant increases in revenues would be \$15.1 million (see Exhibits 4.22 and 4.23), or but \$2.2 million less than the revenues added from the betterment levy and its corresponding real estate taxes (\$17.3 million - \$15.1 million = \$2.2 million). Still another option would be to apply continuous assessment over the impact area and to implement a special betterment levy on transit-related increases in property value.

PROPERTY TAX REVENUES
FROM ALL INCREASES IN PROPERTY VALUES
ASSUMING PROMPT, CONTINOUS PROPERTY REASSESSMENT
METRO CENTER IMPACT AREA
WASHINGTON, D.C.
 (Millions of Dollars)

<u>Year</u>	<u>Projected Property Value 1/</u>	<u>Projected Assessed Value</u>	<u>Real Estate Tax Revenues^{2/}</u>	<u>Increase in Real Estate Tax Revenues^{3/}</u>	<u>Present Value Factor^{4/}</u>	<u>Present Value at 1976</u>
1976	\$420	\$420	\$ 8.4	-0-	1.000	-0-
1977	\$437	\$437	\$ 8.7	\$.3	.935	\$.281
1978	\$453	\$453	\$ 9.1	\$.7	.873	\$.611
1979	\$470	\$470	\$ 9.4	\$ 1.0	.816	\$.816
1980	\$486	\$486	\$ 9.7	\$ 1.3	.763	\$.992
1981	\$503	\$503	\$ 10.1	\$ 1.7	.713	\$ 1.212
1982	\$520	\$520	\$ 10.4	\$ 2.0	.666	\$ 1.332
1983	\$536	\$536	\$ 10.7	\$ 2.3	.623	\$ 1.433
1984	\$553	\$553	\$ 11.1	\$ 2.7	.582	\$ 1.571
1985	\$569	\$569	\$ 11.4	\$ 3.0	.544	\$ 1.632
1986	\$586	\$586	\$ 11.7	\$ 3.3	.508	\$ 1.676
1987	\$603	\$603	\$ 12.1	\$ 3.7	.475	\$ 1.758
1988	\$620	\$620	\$ 12.4	\$ 4.0	.444	\$ 1.776
Total	NA	NA	\$135.2	\$26.0	NA	\$15.090

1/ Assumes value increments over property tax base accrue by equal amounts in the years 1976-1988, from \$420 million to \$620 million, and remain constant thereafter. Magnitude of increment based on Reynolds & Reynolds, Inc. case study cited previously.

2/ At assumed effective tax rate of 2 percent per \$100 of assessed valuation. The effective tax rate = official tax rate X assessment ratio.

3/ Over real estate tax revenues resulting from property tax base of \$420 million in 1976.

4/ Assumes discount rate of 7 percent in computing present value as of 1976.

Source: Gladstone Associates.

PROPERTY TAX REVENUES
FROM ALL INCREASES IN PROPERTY VALUES
ASSUMING SLOW CYCLICAL PROPERTY REASSESSMENT
METRO CENTER IMPACT AREA
WASHINGTON, D.C.
(Millions of Dollars)

<u>Year</u>	<u>Projected Property Value</u>	<u>Projected Assessed Value</u>	<u>Real Estate Tax Revenues</u>	<u>Increase in Real Estate Tax Revenues</u>	<u>Present Value Factor</u>	<u>Present Value at 1976</u>
1976	\$420	\$420	\$ 8.4	-0-	1.000	-0-
1977	\$420	\$420	\$ 8.4	-0-	.935	-0-
1978	\$420	\$420	\$ 8.4	-0-	.873	-0-
1979	\$420	\$420	\$ 8.4	-0-	.816	-0-
1980	\$420	\$420	\$ 8.4	-0-	.763	-0-
1981	\$420	\$420	\$ 8.4	-0-	.713	-0-
1982	\$520	\$520	\$ 10.4	\$ 2.0	.666	\$1.332
1983	\$520	\$520	\$ 10.4	\$ 2.0	.623	\$1.246
1984	\$520	\$520	\$ 10.4	\$ 2.0	.582	\$1.164
1985	\$520	\$520	\$ 10.4	\$ 2.0	.544	\$1.088
1986	\$520	\$520	\$ 10.4	\$ 2.0	.508	\$1.016
1987	\$520	\$520	\$ 10.4	\$ 2.0	.475	\$.950
1988	<u>\$620</u>	<u>\$620</u>	<u>\$ 12.4</u>	<u>\$ 4.0</u>	<u>.444</u>	<u>\$1.776</u>
Totals	NA	NA	\$125.2	\$15.0	NA	\$8.572

Note: Assumptions per previous exhibit unless otherwise specified below.

1/ Property reassessments in 1976 and every six years thereafter.

Source: Gladstone Associates.

The betterment levy, however, could amount to a new tax entailing considerably more "costs" (both political and administrative) than improved real estate tax practices. Consequently, though the evidence is hardly conclusive, this specific example suggests the cost-effectiveness of improving the existing property tax system (through prompt, continuous reassessment) and leads one to question the utility of imposing a betterment levy, at least as the first step. Exhibit 4.24 provides a comparison of the relative revenue yields for various alternatives.

This conclusion is the more warranted, when it is remarked that Metro Center was the AMRA/OMPД case study with the greatest potential increases in land values. Exhibit 4.25 summarizes the results of the other case studies, and (among other things) highlights the range of value increases. In these other instances, it is to be expected that the smaller value increments would glean correspondingly smaller revenues from a betterment levy (assuming, of course, the same tax rate), but that implementation of such a levy would confront similar political and administrative problems.

METRO CENTER IMPACT AREAWASHINGTON, D.C.

(Millions of Dollars)

<u>Alternatives and Sources of Revenue</u>	Present Value Of Revenues At 1976	Added Revenues Relative To Alternative 1/
1. Existing Real Estate Tax (slow, cyclical reassessment of transit-related value increases)	\$3.4	-0-
2. Existing Real Estate Tax (prompt, continuous reassessment of transit-related value increases)	\$6.0	\$2.6
3. Existing Real Estate Tax and Betterment Levy (prompt, continuous reassessment of transit-related value increases)	\$17.3	\$13.8
Real Estate Taxes	(\$5.2)	
Betterment Levy	(\$12.1)	
-----	-----	-----
4. Existing Real Estate Tax (prompt, continuous reassessment of all value increases in impact area)	\$15.1	\$11.7
5. Existing Real Estate Tax (prompt, continuous reassessment of all value increases in impact area) and Betterment Levy on transit-related value increases	\$26.4	\$23.0
Real Estate Taxes 1/	(\$14.3)	
Betterment Levy	(\$12.1)	

Note: Some alternatives reflect options open to local government (e.g. #1, a "do nothing" alternative). Others are more akin to analytical constructs (e.g. #2, since cyclical reassessment would have to be instituted for all impact area properties to determine which parcels had increased in value as a result of transit — hence suggesting the likelihood of levying real estate taxes on all increases in value, rather than transit-related alone). Still other alternatives could be listed (e.g. a #6, comprising #1 the existing real estate tax, through prompt continuous reassessment of all value increases in the impact area, and a betterment levy on transit- and other-related increases in value).

1/ Real estate taxes in this instance are \$15.1 million - \$.8 million = \$14.3. The \$.8 million is the decrease in real estate revenue yield due to the imposition of the betterment levy on the transit-related value increases (\$80 million).

SUMMARY OF INCREASED PROPERTY VALUES
14 TRANSIT STATION AREAS STUDIED BY AMRA/OMP
In 1976 Dollars

Station Area/ Location	Setting Density Use Mix	Development Trends and Constraints	Period Studied	Projected Increase in Property Values 1/	
				Land (000's)	Improvements (000's)
Metro Center, Washington, D. C.	CBD, high density	Potential for growth of retailing and some office	1976-1988	\$73,000	\$127,000
Cain Street Atlanta	CBD, 10-20 FAR; commercial, some retail	Good location; strong market for new office and hotel development	1976-1990	\$53,000	\$146,000
Avondale Atlanta	Low and moderate density mixed use; residential, some industrial	Residential and office growth expected despite assemblage problems; major industrial growth possible	1976-1990	\$12,100	\$ 83,000
Potomac Ave. Washington, D. C.	Moderate density residential, some commercial	Potential for commer- cial development zoning changes needed and likely	1976-1988	\$11,000	\$ 62,000
Silver Spring Montgomery Co. Maryland	Old CBD, moderate density retail and commercial	After slow start, should have potential for significant new growth zoning is development oriented	1976-1988	\$10,000	\$152,000
Rhode Island Ave. Washington, D. C.	Moderate density residential and industrial	Station located along rail right-of-way; development subsidies necessary	1976-1988	\$ 5,000	\$110,000
Doraville Atlanta	Low density res- idential and industrial	Station located on rail right-of-way; slow growth anticipated for all uses	1976-1990	\$ 4,836	\$ 21,220
Eastlake Atlanta	Single family residential, some commercial	Assemblage difficult; some housing growth anticipated	1976-1990	\$ 1,070	\$ 15,960
Reisterstown Baltimore	Low to moderate density; mixed residential, com- mercial, some industrial	Significant residential and office growth pos- sible only with public assistance	1975-1995	\$ 354	\$ 8,566
Mondawmin Baltimore	Low to moderate density; all uses present	Area is low-income and has weak market; strong public action needed	1975-1995	\$ 156	\$ 770
Rockridge Oakland	Low density residential	Some residential growth potential; down-zoning prevented \$800,000 increase in land value	1965-1975	0	0
Coliseum Oakland	Moderate density residential and industrial	Unattractive area, no development potential	1965-1975	0	0

Note: Indicated increases in property value are as a result of transit and other factors operating in each station area, based on estimates by real estate consultants — usually an appraiser or economist with working knowledge of development conditions within the transit stations area in question.

1/ It should be stressed that these case study results are not strictly comparable, both by virtue of the substantial variations among case studies (e.g. as to development factors at work in the area) as well as significant differences in the size of each impact area, the boundaries of which were dictated to a great extent by applicable zoning, existing development and physical or geographic barriers.

2/ Two station locations have been deleted, both of them in San Francisco. Unlike the other twelve, the time span covered was the past decade, hence making the results less comparable to the projected value increases listed here.

Source: Administration and Management Research Association of New York City, Inc. and Office of Midtown Planning and Development, Office of the Mayor, City of New York.

Policy Implications and Issues

The value capture concept, as we have seen, has aroused special interest in the U.S. recently, particularly as a possible means of financing transit facilities. Experience to date, however, has been exceedingly limited, notably with the "narrow concept" of value capture which has been the focus for this chapter.

This limited experience is less surprising when value capture is subjected to close examination. True, the concept offers apparent advantages (e.g. access to a "untapped" source of funds for transit, and equity in terms of asking beneficiaries to help pay for system costs). But value capture confronts a number of practical difficulties, which range from developing definitive estimates of revenue yield, to structuring equitable procedures for value capture, to devising an effective program of property reassessment and tax collection, to overcoming potent political opposition.

Certain aspects of value capture are most complex. Understanding the art or science of assessment alone is a big hurdle for the uninitiated. Moreover, implementing even seemingly modest measures (e.g. improving certain administrative and assessment practices of the existing property tax system) would require a major effort in many communities.

At this community level, it is useful to view value capture from the standpoint of a local practitioner considering a variety of schemes, ranging from improvements in the existing system of real estate taxation to imposition of an additional betterment levy. From this perspective, two basic questions of policy are:

- The payoff, or marginal effectiveness of alternate value capture schemes (i.e. added revenues less added costs). Specifically, if the existing real estate tax is an effective value capture method, are the financing potentials from an additional betterment levy worth the added costs (e.g. isolation of transit impact on a parcel-by-parcel basis at intervals short enough to capture significant increments in property value).
- The implementation strategy, given the above. Specifically, should a start be made with relatively modest measures (e.g. improvements in assessment practice, so as to exploit the existing real estate tax more effectively) or with more ambitious reforms (e.g. a betterment levy, which may have greater impact but also higher uncertainties and implementation costs).

The following concluding comments are offered in this framework.

Financing Potentials from Value Capture

With respect to the "broad concept" of value capture, previous studies have placed financing potentials at approximately 20 to 40 percent (and in some cases up to 100 percent), as compared to the capital costs of transit improvements, which estimates appear unfounded. Based on analysis completed for this assignment, a combination of innovative financing techniques (corresponding to the "broad concept" of value capture) could defray perhaps 5 to 15 percent of the capital costs associated with certain fixed guideway facilities (e.g. "light rail" line or small area system such as a DPM). These results, judged reasonable under an ambitious but achievable application of innovative financing techniques, would vary, of course, from community to community. But this order of magnitude does serve to suggest the significance of innovative financing techniques in the context of other available revenue sources.

Concerning the "narrow concept" of value capture, a specific example was developed to illustrate an analytical approach toward identifying financing potentials. It must be emphasized that this example assumed projected increases in property values as reported in a recent case study of the Metro Center transit station area in Washington, D.C. In retrospect, these value increments (on the order of \$80 million over 12 years) seem somewhat small, relative (say) to the magnitude of private investment possible for the area (a single, large-scale project could account for \$60 to \$80 million alone). At any rate, absence of empirical data on aggregate property value changes around transit facilities continues to make this step among the weakest link in a chain of necessary planning assumptions.

Other things being equal, better accessibility and attendant advantages from a transit improvement should produce positive impacts on property values. But in real world, property value impacts of transit vary widely, and in many cases may not be significant. Also, certain factors are likely to limit still further the scope of financing potentials from value capture (see Feature Box following). Consequently, it is exceedingly difficult to determine in advance the extent of payoffs to government.

PRACTICAL AND PUBLIC POLICY PROBLEMS
AFFECTING VALUE CAPTURE POTENTIAL IN
AMRA/OMPD CASE STUDY AREA

The station area studies indicate that capture of transit generated land value impacts has potential to serve as a significant source of transit funding. Practical and public policy problems, however, are likely to limit its effectiveness in this area.

First, it should be noted that the land impacts projected for the various station areas will not be generated immediately but will occur gradually over periods of from ten to twelve years. In many cases, the public will have to wait a long time to recoup its investment and value capture techniques capable of dealing with small and irregularly spaced increments of land value will be necessary.

Second, a very large part of the value capture potential of any transit system will be generated within a relatively small number of high-density station areas. This is not a serious problem, however, since station and line construction costs will usually be greater in high-density areas where tunneling may be required than in low-density areas where surface or elevated construction is possible. Construction costs for some of the stations studied indicate that areas enjoying good market conditions may enjoy land value impacts in the general range of station construction costs; many low-density station areas, however, may fail to generate land value impacts equal to the cost of constructing the transit stations serving them.

Third, a serious problem is that it will never prove feasible to effect 100 percent value capture in situations where private developers are involved. The field of real estate development is very risky; windfall profits on some developments are not a luxury but a necessity for many developers. Past experience has indicated that recapture of more than 40 percent of land value windfalls may serve to discourage developer interest. An overly ambitious value capture policy is therefore likely to prove counterproductive.

Of course, government can always try to limit or restrict the role of the private developer by directly involving itself in the development process and thus reserving a larger portion of potential profits to itself. Such a course of action exposes government to risk of loss, however, which might well counter-balance any financial gains.

Fourth, as the detailed studies in Volume II show, not all of the land value increases in transit station areas are generated by transit improvements and, therefore, should not necessarily be subject to value capture. A public policy of recapturing all land value increases regardless of source would raise legal difficulties only if certain techniques, such as special assessment, were employed. A serious question of equity would always be present, however: although all land value increases are in some way generated by the actions of society, would it be truly equitable to subject landowners in transit station areas to a total recapture policy, while allowing owners elsewhere undiminished enjoyment of windfalls?

In summary, our research thus far indicates that while transit may generate significant land value impacts in many station areas, recapture of land values will probably prove an important but limited source of transit financing. At best, such value capture may be capable of paying part of the local share of transit construction costs of providing design improvements and amenities within station areas.

Source: Administration and Management Research Association and Office of Midtown Planning and Development Office of The Mayor of New York City's Transit Station Area Joint Development: Strategies for Implementation (Final Report: 1976), pp. 35-37. The Volume II reference is to Economic Case Studies (1976), also prepared by Administration and Management Research Association and Office of Midtown Planning and Development.

Property Assessment Practices

Even where value increases can be established, there is a danger in supposing that value capture will produce the desired results, if the foundation has not been properly laid. Before added revenues can be realized through the existing real estate tax -- much less a betterment levy -- on property value increments, the basic assessment and administrative features of the locality's tax system must be in proper order. In many communities this would require a major effort.

Specifically, revenue realization requires a program of rapid and accurate property assessment to track the types of value changes triggered by transit. In this connection it will be recalled that sharp value increases associated with transit typically occur but once, in a "ratchet effect," and then usually in the early stages of the improvement's life cycle (e.g. during construction or early operation of the facility). To exploit these financing potentials -- through either the existing real estate tax or an added betterment levy -- reassessment practices would have to be substantially improved in many (perhaps most) U.S. communities today. Otherwise stated, reassessment practices at present tend to be rudimentary for such precise purposes. Further, there are reasons for thinking that such assessment requirements would need to significantly more stringent under a betterment levy scheme.

Betterment Levy Administration

Reference to assessment requirements under a betterment levy raises the matter of how such a special tax could be managed. Several specific implementation issues are suggested in the following Exhibit (4.26).

In this connection, it should be noted that attributing parcel-by-parcel value increments to specific public improvements is a highly complicated business. In principal, such an attribution could be obtained through extensive, multi-variate analysis of transaction data within both the affected transit station area and a suitable control area. Such analysis, besides being expensive to perform and requiring the services of highly trained personnel, would present a number of

SELECTED ATTRIBUTES OF
POSSIBLE BETTERMENT LEVY

<u>Attribute</u>	<u>Possible Betterment Levy</u>	<u>Implementation Issues</u>
Tax Base	Value of Land Above, plus existing improvements (or pre-betterment improvements) Above, plus post-betterment construction	Should value of new construction be exempted from a betterment levy so as not to deter new development? If so, how to isolate new construction from other components of property value?
Properties Affected	Properties increasing in value Properties decreasing in value Properties not changing in value	Should properties decreasing in value or not experiencing change be exempted from a betterment levy, so as to exclude property owner not benefiting from the transit improvement. If so, how to identify these three types of properties on a parcel-by-parcel basis?
Cause of Change in Property Value	Properties changing in value as a result of transit improvement. Properties changing in value as a result of other factors.	Should betterment levy apply to only those properties which change in value as a result of transit, as distinct from other factors (e.g. other actions by government or general economic conditions)? If so, how to isolate effect of transit as distinct from other relevant factors, on individual values?

Source: Gladstone Associates.

serious problems, ranging from insufficient quantity or quality of data, ^{1/} to difficulties of determining "comparable" control areas in a statistically satisfactory fashion. Yet, some isolation of transit impact would seem desirable, from the standpoint of providing both a rationale and possibly legal support for a value capture program.

1/ Ideally, such a property assessment system would be built around three files.

- a property record file, containing a unique parcel identifier number for each record, street address, site characteristics, improvement characteristics, building perimeter sketch, building permit history, income and expense data, sales history, record of inspection, and appeals history -- all updated almost continuously;
- an ownership file, containing a parcel identifier number, name of owner, address, assessed value, and codes reflecting assessible status, municipality, and tax districts, along with provisions for recording the name and address of the taxpayer if different from the owner, as well as the address of absentee landlords -- for use in mailing of assessment and tax notices; and
- a sales file, containing a physical description of sold properties as of date of sale, sale price, assessed value, year last appraised, legal instrument number, address, and use code. Other highly desirable information would include cash equivalent sale price, time adjusted sale price, assessment ratio, sale confirmation code, and reject code -- for purposes of assessment.

Desirably, data in this latter file would include references to parties involved so that buyers, sellers and other parties can be called upon to implement data in transfer documents through questionnaires, interviews or telephone calls.

Other Economic Considerations

In addition to the above, there are other considerations that influence the economic feasibility of a value capture program. Political and administrative difficulties may arise in an attempt to capture a substantial portion of property value increments where private real estate interests are involved. One of the issues that may ensue concerns the equity of subjecting property owners around transit station areas to a public value capture program, while allowing owners elsewhere to enjoy increases in property values without interference. There is also the attendant risk that an overly ambitious value capture policy may deter otherwise desirable development.

The Case for Property Tax Reform

This review yields two broad sets of reform measures open to local officials considering value capture under the "narrow concept" outlined above.

- The first, comprising improvements in the basic assessment and administrative features of the property tax system, have already been put into effect in a few communities -- albeit in a non-transit context -- with good results. These proposals (as distinct from those entailing a betterment levy) rely very little on theory and attempt to incorporate the best current practices in this country or elsewhere.
- The second (and far more ambitious) reform involves some form of betterment levy, holds long-term promise according to theory but poses a host of political and administrative obstacles which must be overcome before practical experience (including empirical evidence of tax yield) can be secured.

Given these latter uncertainties, implementing a betterment levy under present conditions may intimidate even the most venturesome local government leaders. To be sure, a number of these obstacles could be cleared by carrying out several well-designed and carefully monitored demonstrations. But such programs would probably need to be underwritten by the federal government, in order to reduce the risk for enterprising state or local governments.

What with these uncertainties, then, a case can be made for starting with the more modest measures of improving property assessment and tax administration, taking care that these are undertaken in a way that does not foreclose moving to

more ambitious steps later. This strategy seems particularly appropriate in the present context, since most value capture schemes require substantial improvements in present day practices of property assessment and tax administration. That is, if steps are not taken to incorporate better administrative practices, many of the more ambitious measures may backfire or not bear fruit.

Further, the payoff from administrative improvements may be substantial. In the earlier example of Metro Center, the revenue yield -- from administrative reforms in the existing tax structure alone -- is sufficiently large to suggest that local officials seeking added funds for transit look first towards exploiting the existing real estate tax more effectively. Moreover, the magnitude of this revenue (\$6.0 million, assuming a continuous program of property reassessment) is important in its own right, even though less than projected revenues from an additional betterment levy on property value increments resulting from transit (\$12.1 million). ^{1/} Such a strategy, seeking first to exploit the existing tax system more effectively, would seem particularly suited to areas to be served by fixed guideway facilities, where strong markets and other favorable development factors are likely to combine with transit to produce substantial positive impacts on property values.

To this end, a partial checklist of steps to reform could range from broad measures which might ultimately affect the entire taxing jurisdiction (e.g. bring assessments up to such uniform percentage of market value as required by law) to more narrow measures which might affect primarily the impact area in question (e.g. aim for annual reassessments, use automated record keeping to permit monitoring of trends in value, as well as more frequent reassessments -- if indicated). Most such measures would probably be permitted by law; a few might require revisions in state or local legislation.

^{1/} See Exhibit 4.21, where revenue yields over the 1976-1988 period are expressed in present value as of 1976. A comparison of these two revenue streams, while hardly conclusive on the strength of this single case, does appear appropriate for illustrative purposes, given the limited empirical evidence which is available on this subject.

If annual assessments are not possible throughout a community, reassessments could at least be conducted on a priority basis, for example as indicated by assessment ratio studies. Such a program, based on "hot spot" maintenance could also be supplemented with periodic revisit of properties in the impact area, and spot checks of building permit and sales transaction data, so as to identify likely instances of changes in property values.

The Case for a Broader Context

Considering the subject of this catalog, the present chapter has concentrated on value capture in a rather narrow context, in several respects. For example, the implications of value capture have been explored primarily in connection with transit applications, rather than in connection with other public actions, ranging from planning decisions to various other types of government investments. Likewise, the ramifications of reforms -- extending from improvements in assessment and administrative practice to more ambitious measures entailing some form of betterment levy -- have been reviewed in a limited context, that of raising more revenues for transit within one or several designated impact areas.

There may be strong reasons, however, for placing value capture in a larger perspective, particularly where ambitious reforms such as a betterment levy are contemplated. A case in point concerns the Metro Center example developed earlier. Illustratively, it might seem from the standpoint of property-related revenues alone that an ambitious value capture program would be indicated to recover some or all of the public costs for transit and other projected capital investments in the area (e.g. the contemplated \$110 million convention center), which are substantial. At first glance, therefore, it might seem that an additional "betterment levy" would be warranted, if all public improvements in Metro Center, and attendant increases in property values, were considered.

Closer inspection of the Metro Center case, however, would suggest several reasons for proceeding cautiously, by specifically evaluating a broader range of considerations. For example:

- Present local government policy is to encourage private investment in the area (and specifically at the Metro Center renewal sites) through a variety of incentives (e.g. land-cost-write-downs,

possible incentive zoning, and a D.C. Government commitment to lease substantial office space in the eventual first phase of the Metro Center redevelopment project 1/). Such incentives are deemed necessary to attract major private investment to the area, said investment having been largely lacking for the past several decades. These investments incentives could be offset by an aggressive value capture scheme (e.g. an added "betterment levy" could work at cross purposes with land-cost-write-downs and other investment incentives provided to developers of renewal sites).

- Other public investments in the Metro Center impact area may have significant economic benefits to the city beyond increased property values and attendant tax revenues per se. Economic benefits from the proposed convention center, for example, stem primarily from additional convention visitors attracted to the Washington area, and resulting room tax revenues, sales tax revenues and employment associated with visitor spending on a city-wide basis, rather than increases in property value and attendant real estate tax revenues. 2/

Considerations such as the above are clearly critical to shaping a value capture program, yet do not lend themselves to analysis within a purely transportation perspective. Nor can transportation alone provide a proper perspective within which to evaluate several well established rationales for taxing real estate value increments (e.g. against backdrop of sustained land price inflation in urban areas, city governments are missing an opportunity if they do not capture more publicly induced incremental values from their own activities).

A more integrated approach to value capture, economic development and other public policies seems indicated, both to permit analysis of possible "trade-offs" between differing city objectives (e.g. added revenues for transit versus revitalization of the central business district) and to view value capture as one of

- 1/ This first project would involve a property directly served by the Metro Center transit station, on land on which the District hopes a private developer will build a \$60 million office and retail complex, considered indispensable to the city's downtown revenue effort. As of 1977, the city was working with a major Houston developer to this end. See, Milton Coleman, "Refurbishing Is Set in City Renewal Area," Washington Post, June 22, 1977. The size of this private investment (\$60 million) may be seen in the context of total transit-related increases in property values for the Metro Center area (\$80 million between 1976 and 1988, as projected in the above referenced study).
- 2/ Gladstone Associates, Feasibility Analysis for a Civic Center in Washington, D.C. Findings and Conclusions (Report for the Government of the District of Columbia: 1977).

several local tools, extending from orthodox property taxes to various fiscal instruments (including the innovative financing techniques reviewed in this catalog, as well as possible betterment levy).

The Literature on Value Capture

The literature on value capture in a transit context, as noted earlier in this chapter, is relatively recent, but has expanded considerably in the past 5 years. A summary of the more important documents is set forth in the accompanying feature box, along with selected examples of the economic literature in non-transit fields.

KEY VALUE CAPTURE LITERATURE

Callies, David L. and Christopher J. Duerksen. "Value Recapture As a Source of Funds to Finance Public Projects." in Urban Law Annual 8: 73-95, 1975. Summarizes the legal and technical aspects of excess land acquisition as they relate to value capture — public use and supplemental condemnation, special tax assessments, intergovernmental cooperation and joint use districts, air and subsurface rights development.

Hicks, J. H. and Hicks, U. K. "Taxation of the Unimproved Value of Land," in Richard Bird and Oliver Oldman (eds.). Readings on Taxation in Developing Countries. Baltimore: Johns Hopkins 1964. An essay which explores the effects of switching from a standard property tax (on land and buildings) to a tax on land alone. Also contains numerous references to the (then) existing economic literature on the subject.

Arthur D. Little, Inc. Financing Public Transportation (prepared for the U.S. Department of Transportation). 1970. The initial identification of various "benefits-assessment" and "land-value capture" strategies considered among the range of local financing options. These include special proximity taxes, lease or sale of air rights and options extending from sale or conversion of extra transit land to multi-use transit corridor development and excess acquisition.

Rice Center for Community Design and Research. Built or Imminent U.S. Examples of Value Capture/Joint Development. 1976. A nationwide survey of projects resulting in 10 case studies in concise, outline form. Projects discussed include: Bankers Trust Building (New York City), Embarcadero BART Station (San Francisco) and Lafayette Place (Boston).

Rice Center for Community Design and Research. Value Capture and Joint Development Applications: Los Angeles, Louisville, Chicago. (prepared for the U.S. Department of Transportation), 1976. Explanation of value capture opportunities in three urban settings. Describes a set of value capture techniques in hypothetical development situations in existing or proposed transit systems. Value capture techniques considered include ad valorem taxation, special district taxation, marginal value-incremental taxation, develop/hold new property, develop/sell real property, hold/sell real property, lease real property, and participation in income from real property.

Rice Center for Community Design and Research. A Value Capture Policy, (four volumes; prepared for the U.S. Department of Transportation). November, 1974. An extensive examination of the theoretical opportunities and constraints of value capture. Volume I summarizes a Houston case study evaluating the advantages and disadvantages of different value capture strategies around transit systems. Volume II deals with proposed solutions to the value capture problem based on excess condemnation, tax assessment and air rights development. Volume III analyzes problems and opportunities of value capture policy implementation in

terms of its role in community development. Volume IV analyzes financial aspects of value capture policy.

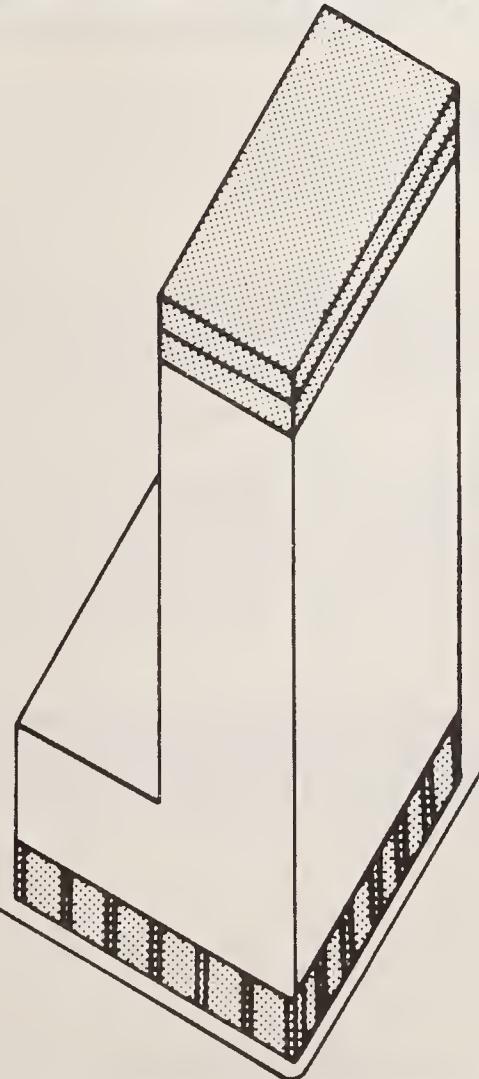
Robinson, J.E. and R.E. Korpil. "Optional Strategies for Increasing Return on Transit Investment," in Westinghouse Engineer, 30(1), 1970. An early review of value capture opportunities, based on expanding the concept of transportation costs and benefits beyond the limits of approved rights-of-way.

Rybeck, Walter. "How the Property Tax Can Be Modernized to Encourage Housing Construction, Rehabilitation and Repairs". Urban Institute Working Paper #112-13: December 16, 1969. A review of property tax reforms that, according to the best evidence available, are likely to encourage more and better housing. Also outlines contrast between these proposals, (including site value taxation, differential taxation and selective tax abatement) and present functioning of the property tax in most jurisdictions with emphasis on economic reasons for change. Selective bibliography covers almost 40 works relating to effects of tax policy on real estate.

Sloan, Allan and Baker, Martin. Enhancing the Public Share of Highway Benefits (prepared by Arthur D. Little, Inc. for the U.S. Department of Transportation). 1974. A useful overview of non-use benefits associated with highways and other transportation facilities, the problem of identifying benefits when they occur, methods of achieving public benefits and constraints on the application of the principle of sharing benefits. Principles and guidelines in benefits realization are offered.

Chapter 5:

Land Use Regulation



100-101

including seabirds

LAND USE REGULATION

This chapter, the first of three devoted to more detailed discussion of twelve innovative financing techniques, explores methods of regulating land surrounding transit stations, including incentive zoning, special district zoning, dedications, exactions and development taxes, and official maps. These techniques can be characterized as follows:

- incentive zoning involves providing a developer with relief from restrictive zoning provisions in return for performance of functions deemed in the public interest.
- special district zoning is similar to incentive zoning, but goes beyond it by entailing a detailed public plan for the specific geographic area in question, along with mandatory requirements on developers.
- dedications and exactions involve a mandatory conveyance of land, facilities or money to a public entity for future community use as a condition for development approval. Dedications concern land or facilities; exactions concern cash payments.
- the official map is one drawn by the planning or zoning agency, showing the locations of various public improvements and land reserved for the public use.

These techniques alone are usually not capable of producing revenue to finance transit directly, but they can offer certain other benefits to transit-related projects:

- first, land use regulation techniques are frequently necessary for attracting new private development around transit -- and hence for employing other financing tools (e.g. taxes, assessments or service charges);
- second, the land use regulations considered here are capable of at least some indirect financing, through developer provision of transit-related improvements (e.g. pedestrian connections to a station area, in return for certain zoning provisions); and
- third, the zoning and subdivision process is in present use throughout the country, has been legally sanctioned as a local government power, and thus forms an existing framework for

implementing these tools. 1/

Zoning is the most important type of land use regulation, and the one most common in the United States. Even though the specific procedures of zoning, and the related subdivision process vary from community to community, a broad understanding is basic to understand the role of land use regulation in governing urban development. To explain this in the simplest way, it is useful to consider public and private sector planning as two parallel streams which come together in zoning and subdivision procedures as part of the larger development process.

That process extends from conception and planning of a project -- typically by a private developer -- through its financing, design and construction. In practice, the decisions in this process are highly diverse and complex, and participants are fragmented and diffused among a wide variety of private individuals and organizations, and many public agencies. For present purposes, the process can be divided into 3 stages, only the first two of which will be discussed here:

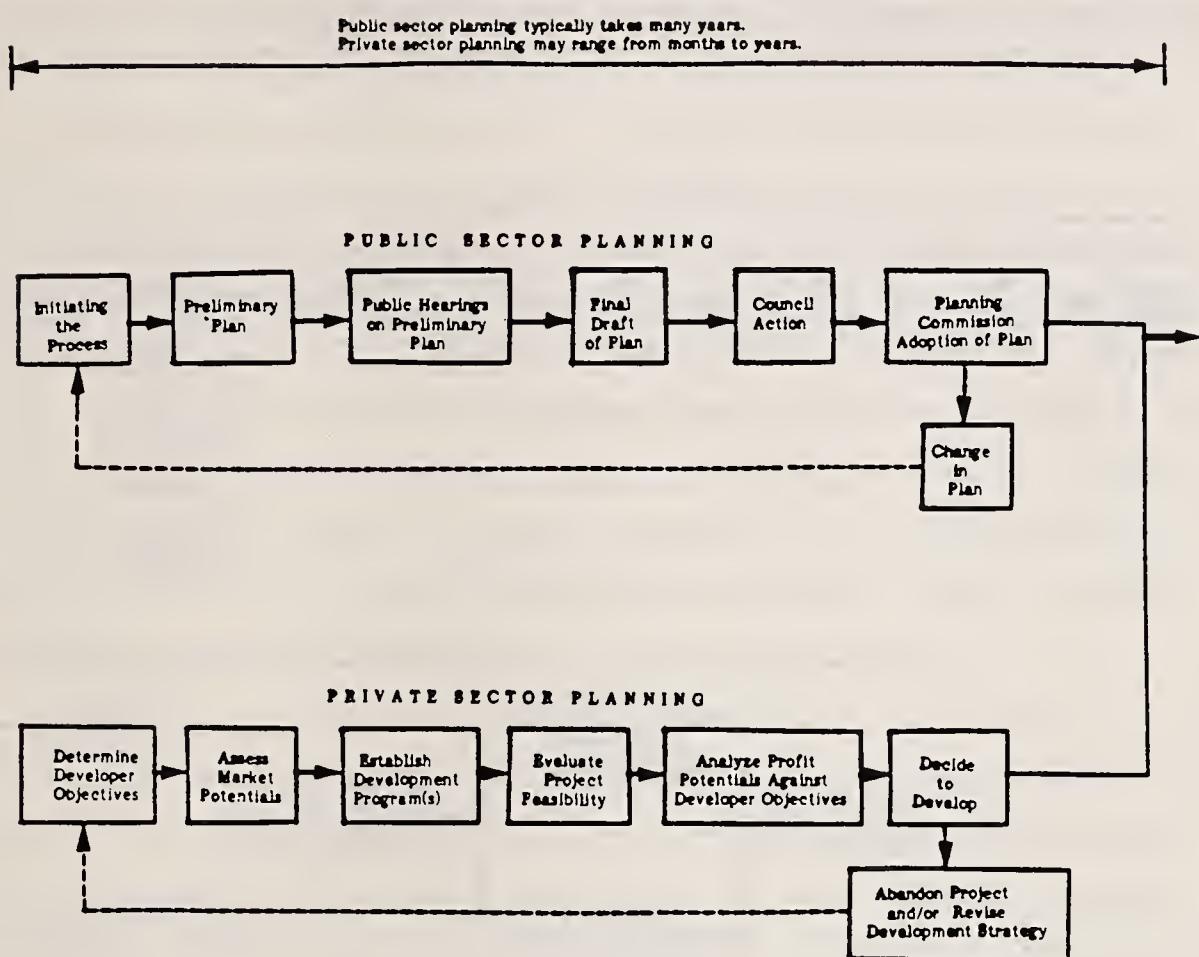
- the planning stage
- the pre-construction stage
- the construction stage.

As shown in Exhibit 5.1, public and private planning tend to proceed independently of each other, prior to zoning and subdivision review in the pre-construction stage. Public planning typically derives at the local level from state creation of certain planning or zoning authority. The elected governmental body, whether county council or city council, may appoint a Planning Board to draw up a master plan incorporating many aspects of the area's future needs, among which are land use recommendations. If accepted, such a plan provides a guide for subsequent zoning and subdivision ordinances, or for revisions of existing ordinances. The plan is

1/ It falls under the police power, the most broadly defined of the three fundamental powers of government which limit rights of property ownership. Others are the power of taxation (see Chapter 6) and eminent domain (see Chapter 7).

Exhibit 5.1

MAJOR STEPS IN THE PLANNING AND



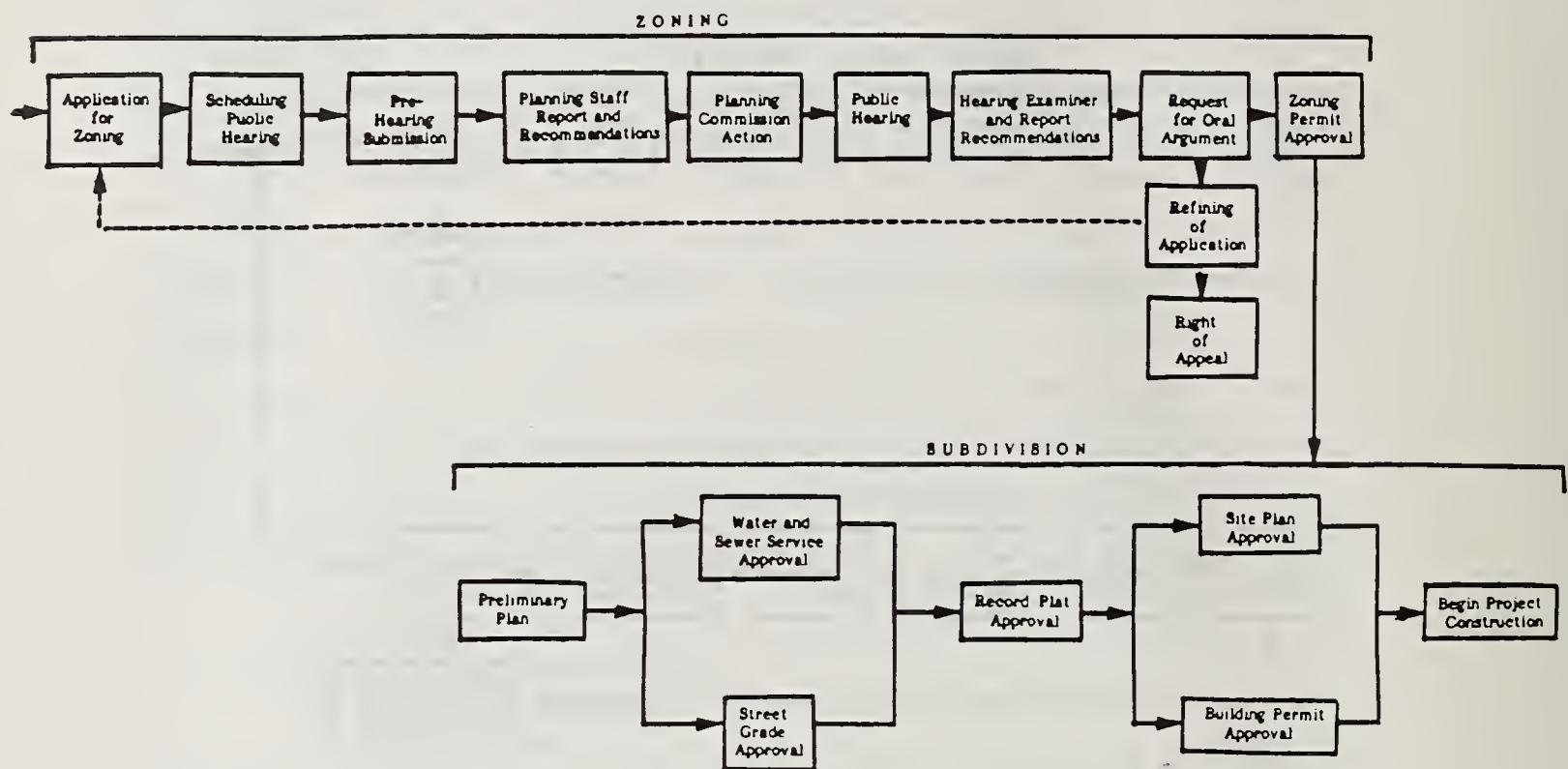
Note: Above assumes rezoning and subdivision approval would be required, typically the case for significant private developments.

Source: Gladstone Associates.

PRE-CONSTRUCTION STAGES OF DEVELOPMENT

PRE-CONSTRUCTION

Time required highly variable, depending on project size and complexity and the attendant public agency review and approval process; typically 6 to 8 months required at a minimum. Other forms of public review (e.g. EIS) may also occur during pre-construction stage.



frequently subject to review, and often incorporates other special functional plans.

In the private sector, a developer usually begins a project by determining objectives, often in terms of return on investment, controlling land values, or corporate diversification. Then comes an assessment of market potentials through an analysis of supply and demand characteristics in a given market area, and an identification of appropriate uses for the site. The principal components of the development would be specified, along with timing, phasing, acreage allocations and program alternatives. With these in mind, the developer can evaluate the project's feasibility, taking into account the scale of required investment, financing alternatives, leveraging possibilities, and cash flow and return. Ensuing project potentials are then measured against objectives, so that decisions may be made as to whether to develop, what property ownership status to opt for, and so forth.

It is in the pre-construction stage that these parallel streams join. At some point, it is incumbent upon the developer (assuming he has retained an architect for preliminary drawings, obtained financing for the project, etc.) to obtain building permits, or to apply for a zoning amendment if needed. Even if an amendment is not required, a developer may have to submit the project for site plan approval by a local planning board or similar agency. Eventually, the developer may be permitted to proceed to construction.

In actuality, major steps in the development process are not necessarily discrete, and often merge and overlap in time. In the public sector, for example, problems and possible strategies are sometimes considered together so that realistic objectives and program priorities can be formulated simultaneously; further, planning strategies are frequently revamped before the full effects of existing program are played out. Conversely, local zoning maps may not be consistent with approved master plans, thus requiring rezoning and/or revision of the master plan at the time a development is proposed. Responding to these requirements, a private developer may revise the initial development program, in search of a better "fit" between project feasibility and prevailing community objectives.

Finally, time itself is a highly variable factor, being heavily dependent on public review and approval procedures during the pre-construction stage. Zoning approval alone can consume anywhere from several months to several years. And considerations such as labor strikes or slowdowns, material shortages and weather conditions can further delay development during the construction stage.

Traditional zoning, as described above, has served to pre-determine the purpose of land. It has a negative orientation, emphasizing limitations on permitted uses, height, bulk, tower coverage and set-backs. However, the results of traditional zoning have been increasingly questioned, as it has often had the effect of segregating land uses into distinct geographic areas, and producing a monotonous design brought about by rigid "zoning envelopes." Recent thinking has attempted to remedy such deficiencies in three ways:

- by moving toward a more beneficial integration of different land uses at a proper scale;
- by emphasizing incentives for better design, provision of amenities, a beneficial mixing of uses and other public purposes; and
- by allowing for fine-grained treatment of areas with special historic, cultural, and economic significance..

For as Charles Abrams observed:

"What is reasonable in one period may be unreasonable in another. There are no precise yardsticks for 'reasonable' or 'due process'. The law of each age is what that age thinks should be the law, and the courts are not above cocking the judicial ear to the attitudes of the times. Practical judgment rather than judicial precedent more often determines the rule. 1/

The most important aspect of recent changes in land use regulation, in the context of this study, is the potential for enhanced relations between

1/ Charles Abrams, The Language of Cities (New York: Avon Books, 1971), p. 236.

zoning and transit. Applicable zoning techniques to this end are discussed below.

Incentive Zoning

Description

Incentive zoning is a means of varying standard limitations and restrictions on development by granting incentives to private developers. To encourage desired development at a particular site, enough incentive must be offered to make investment attractive, relative to other potential projects. For instance, certain public amenities may not pay for themselves — in terms of increased achievable rents or higher ground values — and hence may not be included as part of many development projects. Where these are realities of the marketplace, incentive zoning may be required to obtain public objectives. Incentives include:

- a density bonus, permitting higher floor-area ratio than allowed under prevailing zoning, granted as a quid pro quo for including certain amenities, such as plazas, arcades, or subway concourses.
- administrative relief, granting a speeded-up review process, which can result in substantial savings to the private developer;
- establishing certain development options as a "matter-of-right," thereby circumventing lengthy public review processes;
- development rights transfers, which allow owners of low density property (that the public desires to preserve as such) to transfer their right to other sites within the area, with owners of other sites paying for the value of the development rights transferred to them;
- differential densities, whereby higher densities are permitted for use (such as residential) which are desired from a public viewpoint but typically produce a lower economic return to the developer; and
- reduction or elimination of parking requirements, notably in areas served by transit.

INCENTIVE ZONING IN SAN FRANCISCO'S MARKET STREET AREA

An important factor in the development of the Market Street area has been the system of bonus zoning implemented in the late 1960's.

The zoning itself resulted from a long process of planning, study, and public debate. Under San Francisco's 1960 zoning ordinance, the Market Street area was zoned for 20 floor-area ratio, (FAR), with 25 FAR permitted in corner parcels. These limits were very high in terms of the scale and amount of development anticipated at that time, and were quite controversial at the time of passage. This situation was thought desirable, however, because at that time San Francisco was in need of new development and did not wish to do anything to discourage investment.

The increased rate of development during the early 1960's and the increased size of individual buildings quickly led to a re-evaluation of this position. In 1963, the Board of Supervisors downzoned the Market Street area to a base of 16 FAR, although it still permitted a 25 percent increase on corner lots. This downzoning was only the prelude to an extensive study of downtown zoning.

The zoning which resulted from the study in 1968 has three especially important features. First, it dropped all parking requirements throughout the core zones and set up a system by which the City Planning Commission could review the locations of major proposed garages.

Second, it broke up the core area into four zones instead of the single blanket district which had existed previously. A central office district permits a basic FAR of 14; a general district and a retail district each allow 10 FAR; and a district for heavy support services is limited to 7 FAR.

Third, a system of bonuses was introduced whereby a developer, by including certain characteristics or amenities within his structure, could increase his FAR substantially beyond the base level. The peak FARs attainable through use of bonuses were 22 to 25 in the office district, the bonuses allow FARs considerably above the 14-FAR base. This provides developers with an opportunity to reach densities in the area of those permitted in 1960, but at a price.

A wide variety of improvements or amenities can be used to obtain bonuses. They include direct access to a parking structure or train stations, plazas, setbacks, sidewalk widenings, reduced coverage on upper floors, and observation decks. A particularly important provision allows a FAR bonus of up to 10 percent for mere proximity to rapid transit stations. It was decided to grant this bonus without requiring public improvements in return because it was felt that the benefit from the bonus would be paid for by the higher site costs necessary to obtain locations near transit stations.

Provision of direct access to transit stations was the infrastructure improvement which most concerned planners, yet the zoning ordinance has generally failed to produce this amenity. It appears that unless a more favorable building location could be arranged, the depth of mezzanines and the basic costs of such underground connections (a minimum of \$250,000) -- combined with perceived additional security costs -- became a significant deterrent to the construction of such improvements.

Source: Administration and Management Research Association and Office of Midtown Planning and Development, Office of the Mayor, City of New York. Transit Station Area Joint Development: Strategies for Implementation (prepared for the U.S. Department of Transportation; 1976).

The goal of incentive zoning is to encourage the public sector and the developer to work together toward mutually acceptable objectives, with both sides benefiting. Resulting public benefits could include:

- public amenities such as transit-related pedestrian improvements (plazas, arcades and subway concourses);
- introduction of new uses, such as a residential development in an existing downtown area, and/or
- increased value of private development resulting in increased property taxes at the location.

Private benefits could relate to the increased chances of project success and profitability, relative to conditions without incentive zoning.

Experience to Date

Incentive zoning appeared in American cities during the late 1950's and early 1960's, in response to the problems arising with traditional zoning, the need to preserve urban landmarks, and a general recognition of the frequent conflict between profit motives and sound urban design.

New York City was a pioneer in this technique, in 1961 initiating a major revision in its zoning ordinance (the first zoning act passed in the United States, in 1916). In this revision, the City reduced the maximum allowable commercial density to 15 FAR. Under a new incentive zoning provision, however, a developer was able to achieve a density of 21.5, significantly above the base of 15, by including certain amenities in his project. This provision was used extensively in the redevelopment of Sixth Avenue, where incentives were chiefly employed to encourage provision of open plazas, arcades and the like. Ostensibly, the resulting environment should have been of high quality and design. However, the subsequent development along Sixth Avenue has received considerable criticism. As one planner stated "a formerly viable urban area was transformed into a single purpose district consisting of a sterile canyon of office towers." The large open plazas in these buildings were also criticized as being barren and unutilized public space, with only a minimal amount of street-level shopping provided. Consequently, Chicago has used incentive provisions in conjunction with the Chicago Central Area Transportation Project, which includes two proposed rapid rail lines. A zoning ordinance enacted in 1972

allowed developers to reduce the number of off-street parking spaces if direct access is provided to a mass transit station. Even before the subway lines were funded, the Sears Tower, First National Bank, Standard Oil, and Time-Life buildings have taken advantage of these incentive provisions.

Financing Potential

In overall terms, incentive zoning cannot normally finance transit directly, but it can provide "in kind" improvements. Such zoning provisions can also encourage high density development around transit, thus contributing to increased fare box revenues and transit finance through other innovative techniques.

Institutional Feasibility

Incentive zoning is most effective where the overall city-wide zoning envelope is relatively restrictive, but can be circumvented by locating in transit-impact zones. Such a situation can be achieved by downzoning other desirable locations, and subsequently permitting higher densities in transit zones. This technique appears successful in both New York and San Francisco in concentrating development into locations considered desirable from a public viewpoint. Conversely, if existing zoning permits densities at levels far above what is supportable in the marketplace, incentives that take the form of increased floor area ratios are relatively less effective as an inducement for development around transit stations.

Incentives need to be carefully structured to respond to the complexities of development economics. This, in turn, necessitates a thorough understanding on the part of the public sector of residual land values, costs imposed by the development review process, key financing factors (e.g. whether local lending institutions typically require structured parking as part of a major project) and the like. For instance, if residential development is being encouraged, incentives provisions must take into account that substantially lower residual values may result from housing, compared to certain commercial uses.

In summary, incentive zoning is a highly cost effective technique for government, since public outlays are modest. While the need for careful

planning and thoughtful structuring of incentives is paramount, these administrative costs are small. Direct revenue production is limited, but the technique, as demonstrated in the three cities discussed, can be effective in concentrating development as well as shifting some public costs to the private sector. Considering the planning and administrative skills called for, however, incentive zoning seems likely to find favor mainly in the largest and most sophisticated local governments.

Special District Zoning

Description

The line between incentive zoning and special district zoning is not always clear, and most special districts contain some incentive provisions. But apart from a master plan (the "acid test" of a special zoning district), there are several distinguishing features this form of land use regulation, including the following:

- it applies to a specific geographic area presenting special planning problems because of existing uses, historical importance, proximity to major public facilities such as transit, or other factors;
- it seeks to protect and enhance existing uses (as distinct from regulating new development) especially in areas threatened by strong redevelopment pressures;
- it entails detailed public planning and pre-regulation of (re) development for the area, as distinct from "wait and see" zoning procedures which rely more on discretionary review of developer proposals; and
- it can embody more mandatory requirements on developers (e.g. provision of public amenities or transit-related improvements specified in the approved public plan for the area), relative to incentive zoning.

In short, this technique typically gives detailed planning treatment to a district's special development problems, prescribes how each parcel of land may be used with great specificity, and calls for a correspondingly greater conformance from private developers than is the case with incentive zoning alone. (Recall that incentive zoning provisions are usually

applicable only at the option of the developer, who can elect to adhere to conventional zoning if he prefers.)

From the standpoint of a developer, special districts can differ in two important respects, relative to incentive zoning, both illustrated by the 29-square block Greenwich Street Special Development District. First, the desired features are expressly mapped so that every lot owner knows beforehand which mandatory and optional features (and attendant density bonuses) apply. Second, since the district's plan is so specific and the schedule of bonuses so precise, developers need not negotiate with the Planning Commission or submit plans for detailed development review -- a potentially significant saving in time and money.

Experience to Date

Experience with special district zoning is limited, as is its direct application to transit. New York City, the pioneer in this field, first enacted a special district in Times Square in 1967 to encourage preservation of the theater district. Subsequent efforts include the Special Fifth Avenue District, often called the gilt-edged district because it is intended primarily for areas with high quality retail usage. Another is the Special Greenwich St. Development District orderly expansion over a multi-block area between the World Trade Center and Batter Park in lower Manhattan (see accompanying Feature Box).

Financing Potential

As with incentive zoning, transit finance benefits are indirect and not likely to result a direct financial return to the transit entity. Public amenities in development surrounding transit station stops, for example, would normally not be funded by the transit entity; hence, there is no reduction in system development cost, although perhaps considerable improvement to the station environment. The Special Greenwich St. Development District, however, provides an illustration of limited revenue potentials. The District has a provision whereby increased FAR can be achieved by contribution to a transit fund at a certain price (at present

\$6.75) per additional square foot of building space (see accompanying Feature Box). In one case, the Banker's Trust building had exhausted design improvements that resulted in density bonuses, yet sought the maximum allowable FAR by this means. Accordingly, the developer contributed \$63,500 to the fund to receive an additional 10,000 square feet of floor space. Clearly these revenues are modest relative to the costs of transit facilities for the area, and in fact this fund is viewed by transit officials as being capable of financing only minor improvements (e.g. station renovation or pedestrian improvements).

Institutional Feasibility

As noted in the previous section, incentives must be artfully structured in order to encourage development in a transit zone relative to other locations. Further, care must be taken to avoid excessively restrictive land use regulation in special districts. For example, mandatory requirements may have a greater degree of specificity (and a higher associated cost) than requirements of conventional zoning outside of the district. While some of these design improvements are required simply because of the resulting increased density brought about by new development, mandatory requirements that are specific and costly can become a disincentive to building in a special district.

Dedication and Exactions

Description

Dedications and exactions involve the mandatory contribution of land, money or facilities by a developer in return for subdivision or development permission. Thus, these techniques also seek to place at least part of the capital burden for needed improvements on the development responsible for incremental demands on public facilities. Dedication, the contribution of land or facilities, is called for where development leading to population and employment growth also increases demand for on-site public facilities and services. Exactions involve monetary contributions to defray external costs generated by new development (e.g. new schools, highways, fire stations). They are frequently used where the improvement needed is not on the site of the development itself.

SPECIAL GREENWICH STREET DEVELOPMENT DISTRICT

The Special Greenwich Street Development District was established in recognition that a 24-block area was ripe for redevelopment for several factors:

- It is adjacent to Wall Street and the World Trade Center;
- It is well served by mass transit, including PATH, The Staten Island Ferry and seven subway stops;
- Over half of the property was undeveloped or under-developed; and
- The real estate market was undergoing active construction, rehabilitation, speculation and property assemblage.

The goals of the District are to strengthen the downtown business center; provide open space; improve pedestrian circulation; coordinate new development; and provide for automatic administration.

This District is intended to be an alternative to rigid master plans and traditional zoning which are viewed as being unable to respond to the uncertainties of the marketplace and incapable of addressing the complex design considerations involved in redevelopment of this particular area. To promote development, a speeded-up review process was proposed, recognizing that delays result in substantial costs of the land, escalation of construction costs and difficulty in attracting tenants and obtaining financing. Accordingly, public hearings were conducted before the Planning Commission and Board of Estimates prior to establishing the District; therefore, complying development required no further public hearings.

Design criteria, including connections to mass transit, were established on a lot-by-lot basis to account for unique locational features and pedestrian requirements of individual parcels. The plan calls for a wide range of amenities to be provided by the primary developer. These design improvements include: pedestrian tunnels, enclosed pedestrian bridges, pedestrian connectors, shopping arcades, elevated plazas, and enclosed plazas. Further, 25 percent of floor area must be devoted to retail uses accessible at grade levels.

These improvements fall into two categories:

- Mandatory improvements are those for which it is neither appropriate nor necessary to provide floor area bonuses, or other incentives. These would include pedestrian connectors required because of increased demand in existing streets and sidewalks.
- Elective improvements are those for which bonuses are deemed appropriate and necessary. These are improvements which will receive extensive public use and will require significant additional expenditures on the part of the developer.

The Special District takes advantage of incentive zoning to encourage voluntary provision of those public amenities. The plan stipulates through formulas how much increased floor area is allowable in return for inclusion of each design improvement. The underlying FAR limit of 10 can be increased to 15 FAR through Special District incentives, and an additional 20 percent to 18 FAR through bonus incentives.

Any additional increased square footage allowance — which would permit development above the 18 FAR ceiling, for example — can be used to increase tower coverage, from the prevailing limit of 40 percent to a maximum of 55 percent, thereby creating a more compact and shorter building. This provision can be particularly advantageous to the developer as increased tower coverage results in a greater proportion of rentable space per floor and reduced construction expense as building costs escalate for higher floors.

The mechanics of the various incentives as applied to the Banker's Trust Building are presented in the following table.

Source: Rice Center for Community Design and Research, Built or Eminent Examples of Value Capture/Joint Development (July, 1976).

Exhibit 5.2

INCENTIVES UTILIZED IN DEVELOPMENT
OF BANKER'S TRUST BUILDING

<u>Improvements</u>	<u>Classification</u>	<u>Rates</u>	<u>Floor Area Allowed (Sq. Ft.)</u>	<u>Cumulative Floor Area (Sq. Ft.)</u>	<u>FAR</u>
Special District Incentives					
65,822 Sq. Ft. Lot	Basic Allowable FAR	10	658,820	658,820	10
Multiple Span Pedestrian Bridge Length 165 Feet	Mandatory PCI	100 SF/LF	16,500	675,320	10.2
Pedestrian Tunnel	Elective PCI	Fixed in Advance	303,500	978,820	14.85
Contribution of \$65,517.50 to District Development Fund	Elective Contribution	\$6.75/S.F.	9,410	988,230	15.00
Bonus Incentives					
100 Feet Shopping Arcade	Mandatory Lot Improvement	100 SF/LF	10,000	998,230	15.2
185 Feet Shopping Way	Mandatory Lot Improvement	400 SF/LF	74,000	1,072,230	16.3
Pedestrian Connection, Two Double Run Escalators to Shopping Way	Mandatory Lot Improvement	Fixed in Advance	30,000	1,102,230	16.7
Elevated Plaza Area 20,000 Sq. Ft.	Preferred Lot Improvement	10 SF/LF	200,000	1,302,230	19.70
160 Trees on Plaza	Required	300 SF/Tree	4,800	1,307,030	19.83
Arcade and Plaza	Discretionary	Fixed in Advance	35,530	1,346,560	20.5
		Excess ^{1/}	160,684	Maximum ^{2/}	Maximum 18
				1,185,876	

Note: PCI = Pedestrian Circulation Improvement.

1/ Excess floor area bonuses, not available for use as floor area, were used to increase tower coverage of building from 40 percent to 53 percent.

2/ Maximum FAR including all bonus and incentive provisions is 18. Floor area cannot exceed this figure.

Source: Rice Center for Community Design and Research, Built or Eminent Examples of Value Capture/ Joint Development (July, 1976).

Dedications and exactions are primarily suburban tools used in conjunction with the process of subdivision. In the case of exactions the developer must seek local government approval for the land he owns to be subdivided, and the exactions are imposed on this approval. Dedications, on the other hand, are both a means of preserving open space and providing land for exceedingly large improvements. The land dedicated by the subdivider is usually calculated as a fixed percentage of the total amount of land in his subdivision, or calculated by a density formula of a certain portion of land per unit. It should also be noted that the public sector can exact contributions during the actual process of land conveyance.

Experience to Date

To some extent, developments and exactions are the fruit of local governments' bitter experiences in the hey-day of land speculation before the Great Depression. Large tracts of land were subdivided, but when the crash came, the local governments, faced with massive tax delinquencies, could not afford the improvements. Furthermore, after World War II, the population movement to the suburbs put serious strains on the small existing local governments and on the already existing residents of those areas who furnished the taxes. Thus, local governments sought the means to guarantee improvement financing.

Subdividers currently required to supply such on-street improvements as sidewalks, storm drains and water and sewer lines and street signs, or to pay a fee in lieu of dedications are also fairly common, especially since the early 1960's, when local governments became increasingly concerned about the diminution of their open space.

With regard to those contributions during the actual process of land conveyance, there is the major example of New York City. It has placed covenants on the Deed of Trust that require a developer to provide certain improvements in the public interest. This approach was used in the development of two office buildings -- 55 Water Street and 99 Pine Street to provide for a pedestrian connection to the proposed Second Avenue

subway. As no bonuses are granted, this land use regulation technique offers little incentive to the developer.

Financing Potential

These two methods, as we have seen, ordinarily help to finance on-street improvements. As a rule, they have not been used to finance transit-related improvements, with the exception of New York City. It is possible that, if imposed in connection with a transit-related project, such techniques would act as a disincentive to development, by reducing return on investment.

Institutional Feasibility

With the above problem in mind concerning their practicability for financing transit, there is probably no major legal or institutional impediment to the imposition of dedications and exactions in the ordinary sense. State enabling acts authorized local governments for such actions, and in some cases even specify those dedications and exactions to be demanded of a developer. In many localities, it is the Board of Zoning (or similar commission) that is empowered to impose conditions for development in certain zones. Even though developers are reluctant to engage in litigation (which increases costs, nonetheless the courts have occasionally adjudged certain exactions to be unconstitutional, based on whether the detriment to the landowner is outweighed by the public benefit conferred. This has yet to be tested for transit. ^{1/}

The Official Map

Description

The official map is a document drawn up by the appropriate planning or zoning agency which shows the location of existing and proposed

^{1/} Donald Hagman and Dean Mischynski, ed., Windfalls for Wipeouts, revised third draft of the manuscript (University of Southern California at Los Angeles, July 6, 1976), Chapter 15, p. 14.

highways, streets and parks. Once the document has been properly filed in the register's office, building permits are no longer issuable in the areas designated for proposed public areas. Mapping or platting is a common technique used by zoning agencies to control subdivision development. It effectively reserves certain land for public purposes by designating where street and infrastructure facilities will be located. Using the official map in this way minimizes condemnation costs, in effect preventing the construction of costly improvements on land which the locality plans to take eventually by making such improvements non-compensable in a condemnation award. In particular, the official map serves as a way to decrease condemnation awards, should the city announce its intentions in advance.

Experience to Date

Official maps, or some variant thereof, have been in use since the early decades of this century. They are ubiquitous among zoning agencies in the U.S.

Financing Potential

Naturally, no direct financing potential is associated with this technique though judicious use of the official map can reduce eventual costs for a subsequent transit improvement.

Institutional Feasibility

This would depend importantly on provisions for the master plan, if a community possesses one. Similarly, if there is no provision for such a map in the present zoning ordinances, its establishment would have to follow the procedure prevalent in the community for amending the said ordinance.

Literature on Land Use Regulations

The literature on this subject is extensive, particularly with regard to legal aspects. A summary of key documents offering guidance to local government officials is set forth on pages following.

KEY LAND USE REGULATION LITERATURE

Administration and Management Research Association and Office of Midtown Planning and Development, Office of the Mayor, City of New York. Transit Station Area Joint Development: Strategies for Implementation Executive Summary and Final Report (prepared for the U.S. Department of Transportation). 1976. In addition to other subjects, also covers land use regulation. Describes a series of land use regulation techniques, and how they can be employed to meet joint development objectives.

Brooks, Mary. Mandatory Dedication of Land or Fees in Lieu of Land for Parks and Schools (Public Administration Service Report #266). Chicago: American Society of Planning Officials, 1971.

Costonis, John H. Space Adrift: Saving Urban Landmarks Through the Chicago Plan. Washington: National Trust for Historic Preservation Trust, 1974. A thorough review of incentive zoning schemes and transfer of development rights from the standpoint of landmark development. Topics include development rights, real estate tax reduction, preservation restrictions, development rights transfer districts, and development rights banks. Extensive references to the literature.

Curtin, D.J. "Requiring Dedication of Land by Developers," in Planning, Zoning and Eminent Domain, 1974: Proceedings. South Hackensack: Southwestern Legal Foundation Institute, 1974.

Department of City Planning, City of New York. Zoning Handbook: A Guide to the New York City Zoning Resolution. January, 1974. A practical introduction to zoning experience in New York. Explains the different zoning classifications and also explains special zoning districts, development right transfers, planned unit developments and the use of restrictive declarations. A glossary and case examples are included.

Montgomery County Planning Board. Everything You Always Wanted to Know about Planning - Zoning - Subdivision in Montgomery County, Maryland. 1973. An excellent introduction to zoning terms, and a step-by-step review of the regulation process. Approaches a complex subject comprehensively and readably. Heavy emphasis on local government role in planning decisions.

National Commission on Urban Problems. Building the American City (report to the Congress and to the President of the United States). 1968. Summary of the 'state of the art' of land use regulation in the U.S. in the 1960's. Part III, Chapter I of the document entitled "Land Use Controls: Zoning and Subdivision Regulations," provided in-depth coverage of all aspects of zoning. Historical zoning, the nature and evolution of conventional regulations, governmental framework and future directions in

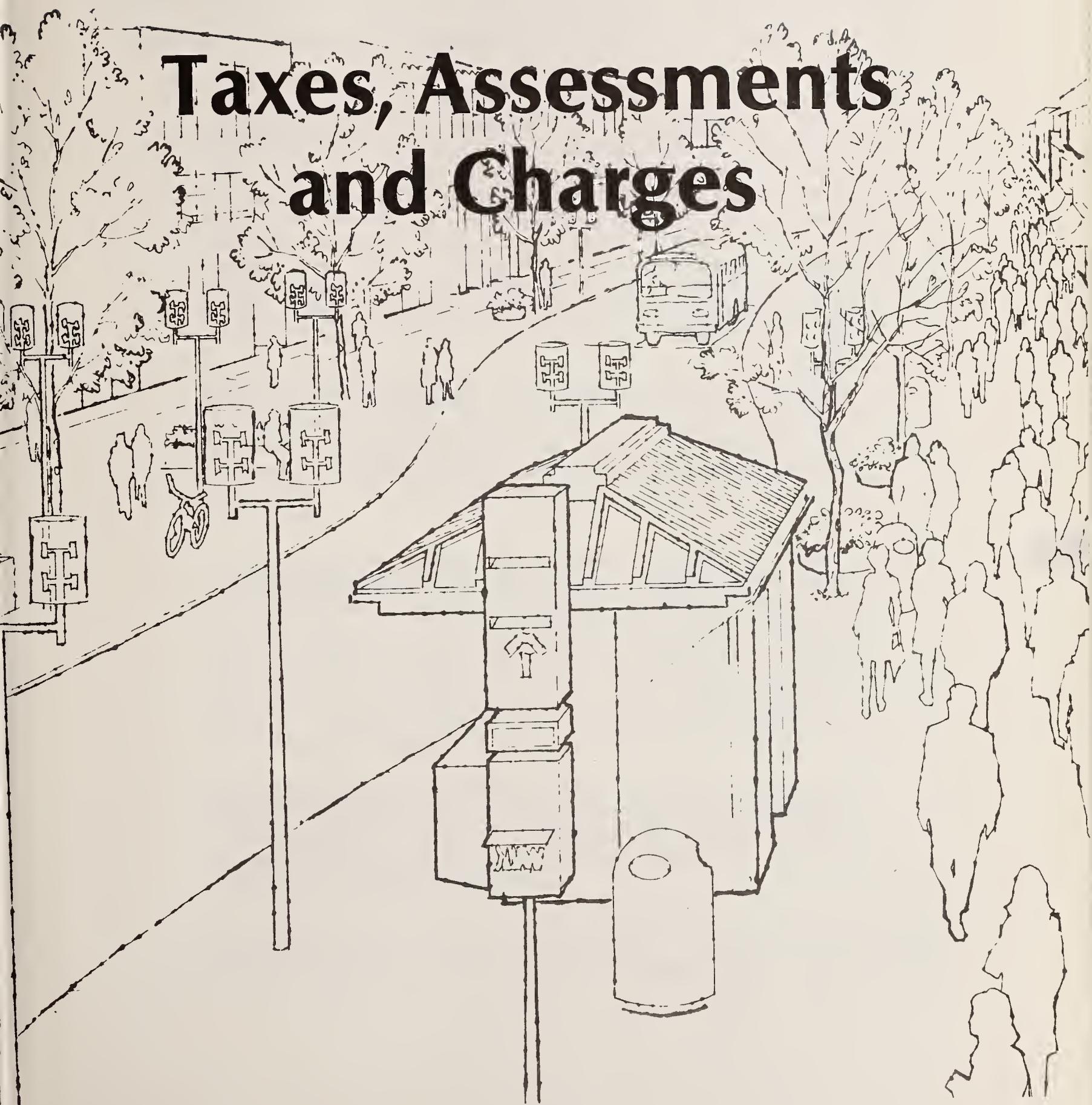
development guidance techniques are discussed. A section in zoning relating to highways and sewer and water lines is included as well. Regulations are graphically presented in tables. Draws on several in-depth research studies.

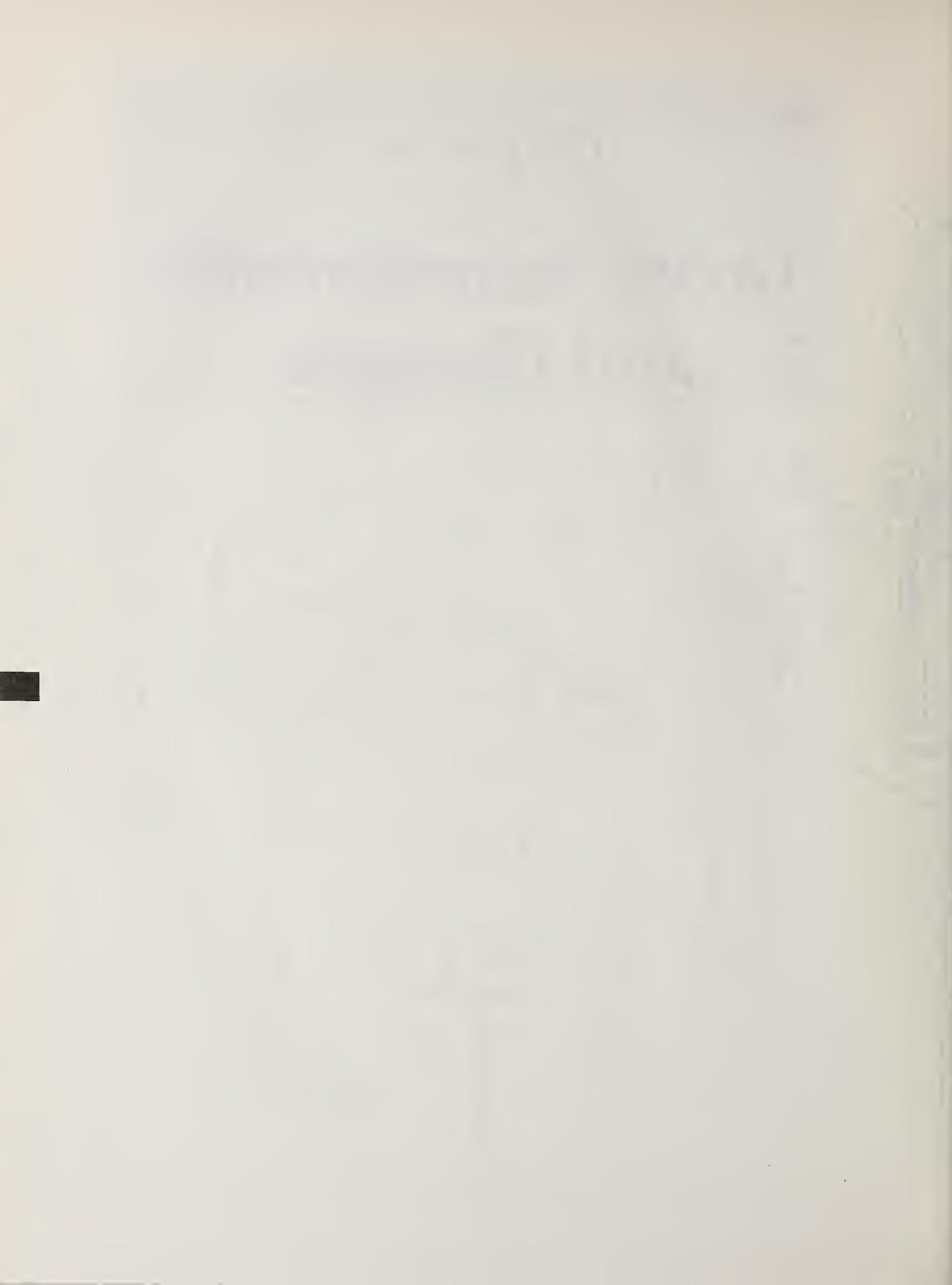
Office of Lower Manhattan Development, Office of the Mayor, City of New York. Special Greenwich Street Development District. Presents a detailed, fine-grained plan for development of the Special Greenwich Street Development District, one of the most sophisticated of special districts attempts. Describes the area, the goals of the District, elements of the plan and how the district works.

Witherspoon, Robert. "Mixed-Use: Economic Incentives to Enliven Downtowns," in Environmental Comment. January 1977: 16-19. A brief article reviewing the state of the art of mixed use zoning based on experience to date in New York City, Washington, D.C. and elsewhere.

Chapter 6:

Taxes, Assessments and Charges





TAXES, ASSESSMENTS AND CHARGES

This chapter explores several taxation techniques with transit financing opportunities. These range from small area applications of the standard property tax, to more innovative techniques such as tax increment financing, special benefit assessments and transit related charges (connector fees, for example).

Specifically covered are:

- Property taxation (also referred to as an ad valorem tax, since the tax is based in principle on a property's value, as distinct from a tax on income, sales price, etc.). This tax, the main source of revenue for many local governments, was originally established in the U.S. as a general property tax on land, buildings and personal property. Gradually, however, the tax became only one on realty, as personal property was easily concealed when the tax assessor paid a visit. Property tax as employed here refers primarily to conventional usage, applying to land and improvements, as distinct from personal property.
- Tax Increment Financing, which relies on the real estate property tax system by earmarking the incremental increase in tax revenues from new development to pay for public investment to assist that development. Tax increment financing, it is important to understand, relies on projected increases in property tax revenues, not imposition of any additional levies on the project area.
- Special benefit assessment, which imposes a special levy so as to shift some share of the financing burden of public improvements on those individuals, groups, or properties receiving the greatest benefit from the facility. An important distinction is that this technique is based upon an assessment on property (i.e. a levy on property to defray, in whole or in part, the cost of a specific improvement or service) as distinct from assessment of a property (i.e. value placed upon a property for purposes of computing the real estate tax).
- Service Charges which represent another approach to benefit assessment, whereby payments are made to the transit entity by abutting property owners. This technique is comparable to sewer or water tap fees in which a property owner pays a fee to connect with a municipal system.

Taxes, assessments and fees rely on the second of four government powers limiting property ownership rights: the power of taxation. They operate through

the fiscal and tax machinery of local government and usually provide tangible security which enables them to be the basis for borrowing (see below).

Consequently, a basic difference between these techniques and those in the land regulation and public land acquisition categories concerns the bonding capacity of most taxes and special assessments. For instance, property taxes can be utilized either to help pay for transit improvements or as a basis for an offering of municipal bonds. In similar fashion, the tax increment system can be used in transit finance, either by using the annual increment to pay for public improvements or by pledging the increment to repay bonds which are used to finance the improvements. Likewise, special benefit assessments can be the basis for marketing special assessment bonds -- bonds payable from levies on properties presumably benefited by the improvement being financed, where the issuing government agrees to make the assessments and earmark the proceeds for debt service.

Furthermore, the transit entity can receive cash payments, as distinct from regulation techniques where the payoff is indirect. But coupled with greater financial return is a greater level of effort required to impose districts and collect revenues, and concomitant higher risk (e.g. for some of these techniques, repayment is contingent upon induced development).

Property Tax

Description

Although the property tax has been discussed in a previous chapter, it merits some special emphasis here. Levied according to the assessed value of real properties, it is the prime local tax for financing many urban functions, and it is frequently applied to transportation-related financing requirements. The property tax has the advantage of being part of the present tax structure, and the disadvantage of rudimentary assessment practices in many areas. One means of employing this tool, for transit purposes, is the dedicated property tax, which levies an additional real estate tax, and earmarks funds for the transit entity. This chapter focuses on this variant of the property tax, notably over small areas surrounding station stops.

Experience to Date

Dedicated property taxes have been employed on a regional basis in several cities (notably San Francisco, Denver and Minneapolis) to finance transit. More relevant here are examples of dedicated property taxes instituted on a small-area basis, such as the City of Chicago's Urban Transportation District. The CUTD was established by voter referendum in 1970 as a separate municipal corporation with taxing powers, and is authorized to levy an additional property tax of up to 10 cents per \$100 equalized assessed value. This 9.5 square mile district covers the entire downtown commercial area, and comprises primarily commercial property (although there are some concentrations of high rise apartments along Lake Michigan). For more details, see the accompanying Feature Box and map.

Berkeley, California has also levied a dedicated property tax of about \$.20 per \$100 of assessed value to finance below-grade subway segments through downtown Berkeley, and attendant costs of station construction. This tax is levied on a city-wide basis, and is in addition to the region-wide dedicated property tax for purposes of financing the BART system. Under initial plans, both BART lines and the station in Berkeley were to have been at- or below-grade. These plans were rejected by local citizens, however, thus necessitating the added financing technique.

Beyond these two urban transportation applications, the dedicated property tax device has been employed by many of the downtown development authorities that evolved in this country over the past decade. Primarily established as an economic development tool for central business district (CBD) areas, these authorities often plan and administer public improvement sinking funds, paid for by special property tax levies. Other attributes of these authorities can include 1) broader responsibilities for coordinating CBD development, 2) sharing of staff and administrative costs between public and private sectors, and 3) close participation of high-level local business executives, either as directors or authority personnel.

Florida was probably the first state to authorize such authorities in 1963, with Miami creating the first of that state's local authorities shortly thereafter. Since then, several of Florida's largest urban centers have enacted similar

CHICAGO'S URBAN TRANSPORTATION DISTRICT

On April 29, 1970, The Chicago City Council passed a resolution authorizing creation of the Chicago Urban Transportation District, defining the boundaries of the District as a 9.5 square mile area in the central city. On June 30, 1970, residents of the District approved its formation, and granted it power to levy taxes to provide the local share of funds for the projects it undertakes.

The District was originally formed to implement findings of the 1968 Central Area Planning Study conducted by the City of Chicago and other agencies, which examined means to establish a modern transportation system for the central business district. Subsequently, the Chicago Central Area Transit Project was developed to provide it. On completion it will link the central business district with other regional systems, by interconnecting commuter, subway, bus and pedestrian ways. In January 1974, the District submitted an Environmental Impact Analysis to UMTA, proposing that UMTA funds would finance much of the suggested 10 year project. However, it did not receive major federal funding; instead, the District's portion of the sum that the city received was limited to \$5 million, which went to finance certain commuter railroads and to rehabilitate the Chicago Transit Authority. This paucity of federal funds has been typical of the project's process.

Therefore, in order to fund the District's share of predesign costs, an additional tax of slightly less than 0.1 percent of the equalized assessed value of real property in the District was levied. It equates to about 10 cents per \$100 of assessed valuation, which is limited by Illinois statute. The table below shows the receipts from these taxes.

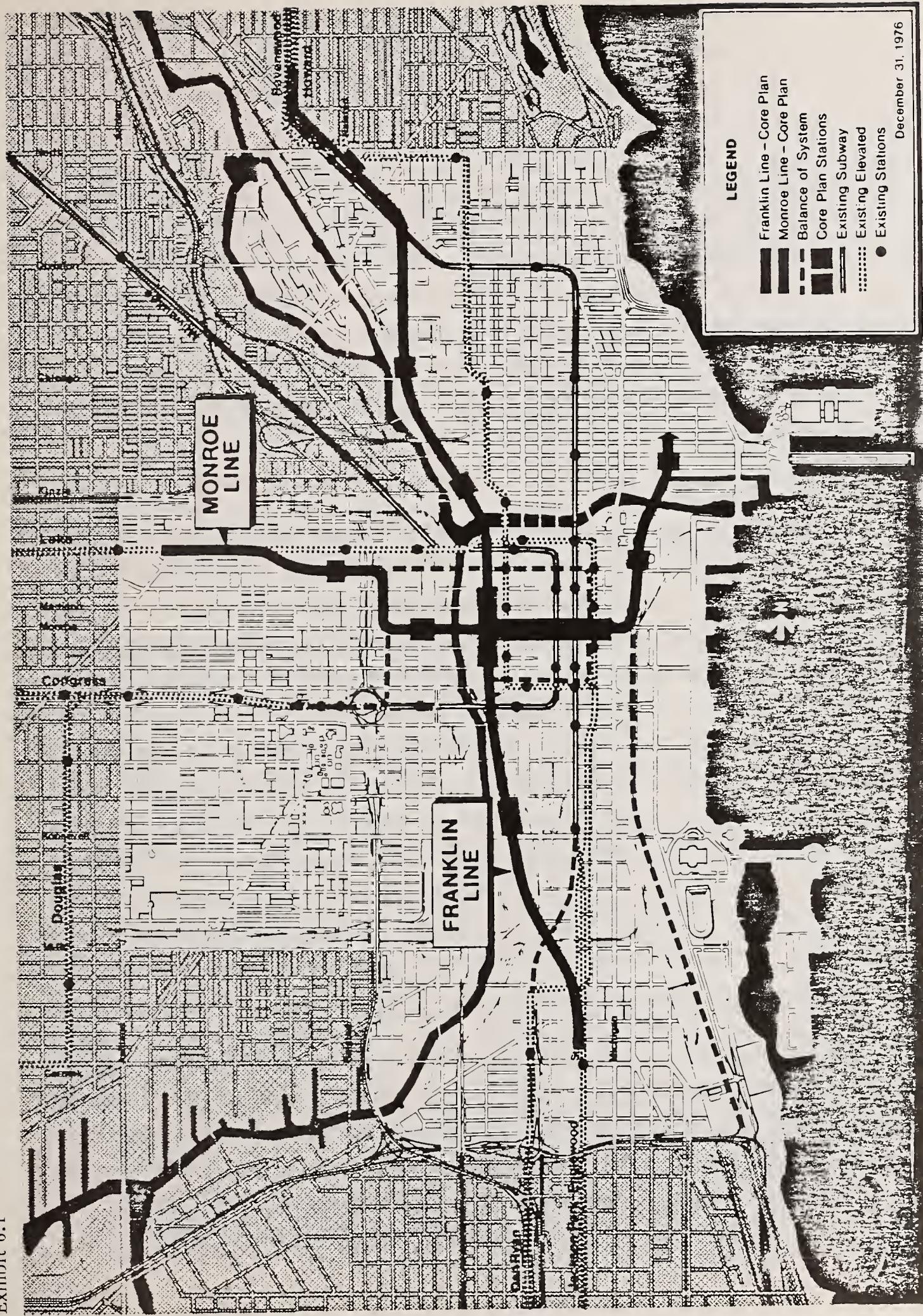
<u>Budget Year</u>	<u>Equalized Assessed Valuation</u>	<u>Tax Levy</u>	<u>Tax Rate Per \$100 E.A.V. (1)</u>	<u>Taxes Billed</u>
1977	N.A.	\$3,409,371	N.A.	N.A.
1976	N.A.	\$3,137,795	N.A.	N.A.
1977	\$3,453,715,753	\$3,170,167	\$.092	\$3,177,419
1974	\$3,309,193,718	\$1,960,644	\$.092	\$2,978,274

(1) E.A.V. (Equalized Assessed Valuation).

Taxpayers have also authorized the District to issue General Obligation Bonds for their share of local costs of design and construction.

Initial efforts of the District were funded partially by a Federal Technical Study grant from the Urban Mass Transportation Administration in 1975. Further federal funds are needed and approval of them is pending.

Source: Chicago Urban Transportation District Annual Report, 1976.



CHICAGO URBAN TRANSPORTATION DISTRICT

ordinances, and now have active authorities. (For one example, see accompanying feature box on Fort Lauderdale.) Even more recently, the State of Michigan has enacted a more comprehensive statute than the original Florida legislation (see subsequent feature box on this subject).

Financing Potential

As one example, the fund in Chicago produces \$3.5 million a year which is presently being used for planning purposes. While the revenue from this source is small compared to the hundreds of millions of dollars required for the proposed transit improvements, it is an important source of "seed" money that can be used for planning, as well as partially financing the local share of an UMTA grant. The fund can be used for debt retirement with a debt ceiling set at 5 percent of assessed value.

Institutional Feasibility

In practice, the property tax has several limitations which restrict its use and effectiveness. For example, assessments are administered infrequently in many jurisdictions, and as a result, can not reflect sharp annual changes in value that might occur in transit station areas. This constraint can be mitigated by improving property tax assessment practices. A first step is to update assessments on a more frequent basis; secondly, appraiser resources can be allocated on a more selective basis, in line with the "hot spot" maintenance approach reviewed in Chapter 2. Many localities are moving in this direction, both to improve accuracy and realize actual cost savings. These improvements can result in an assessment program capable of closely tracking changes in value of land and improvements. Increases in value surrounding transit stations can then be translated quickly onto assessment rolls, and shortly thereafter produce additional property tax revenues. Such improvements in assessment and administrative practices, of course, can make the entire property tax system more effective, not just small area special districts.

Also, for small area applications a central issue is whether political support can be found for implementing a dedicated property tax. A great deal hinges on local economic and political conditions, as discussed in Chapter 2. These conditions suggest that new levies over small areas be set at a nominal rate so as not to affect

FORT LAUDERDALE'S
DOWNTOWN DEVELOPMENT AUTHORITY

In response to requests from the City Commission and downtown business interests, the Florida State Legislature in 1965 created the Downtown Development Authority of the City of Fort Lauderdale. The charge of this public agency is "to revitalize and preserve property values and prevent deterioration in the downtown area." It has broad powers to plan, construct and maintain public improvements in the central business area and is supported by a special ad valorem levy within its 300-acre special tax district.

Land Acquisition and Disposition

After a 1971 referendum of voters in the tax district, which authorized the issuance of a \$12.5 million bond issue, the agency acquired, cleared, and prepared for development 12 acres of land located in the core of the business district. The DDA in 1973 entered into a disposition agreement with a national development company. However, the economic recession of 1974-1975 negated this effort. At present, the agency is updating its 1967 development plan for the district and is concurrently negotiating with developers for the sale or lease of land that it owns, which is presently being used for parking and temporary recreational uses.

Goals, Objectives and Policies

In keeping with the legislative mandate to revitalize the downtown area, the DDA has adopted the following operational goals which will stimulate investment opportunities by private owners, as well as public bodies:

- Enact a development plan which will provide for projected growth through a rational arrangement of land uses and functions.
- Strengthen the downtown's role as a financial, professional and governmental center by the addition of good quality office space.
- Capture a share of the area's convention and tourist trade by increasing hotel accomodations and building downtown exhibition and convention facilities.
- Re-establish the downtown's position as a retail center by upgrading the existing stores and creating new ones which will appeal to workers, tourists and residents.
- Create an efficient and safe circulation pattern within and between the downtown and its contiguous areas and neighborhoods.
- Plan and implement a coherent parking program to service shoppers, workers and business visitors.

- Create a safe and pleasant pedestrian movement by reducing auto congestion and engine pollution; separate pedestrian from vehicular movement; and provide an alternative to private automobile usage.
- Provide marketable building sites for new office and retail facilities, in-town housing accommodations, and area-wide civic and cultural facilities.

The major cost thus far has been \$10 million (purchase and clearing of 12 acres).

Timetable

Project conceived in 1964; purchase of land began in early 1972; clearing and demolition began in late 1972 and was completed in 1974; negotiation with potential developers of the tract is continuing at present.

Source: ULI-The Urban Land Institute, Palm Beach Project Brochure (Fall 1976).

MICHIGAN'S DOWNTOWN DEVELOPMENT AUTHORITIES

In 1975, the Michigan legislature enacted L A 197, an act authorizing local Downtown Development Authorities to assist in commercial revitalization, historic preservation, and neighborhood improvements within downtown business districts. Unlike economic development corporations, which operate on a city-wide basis, these authorities may operate anywhere within the general "downtown district" as designated in the local enabling ordinance.

A DDA must be authorized by local ordinance and approved by the chief municipal executive officer (mayor). The mayor serves as a member of the governing board and appoints all other eight members, subject to local governing body approval. At least five board members must "have an interest in" property located in the downtown district, and at least one member shall be a downtown resident. The Chairman of the Board is selected by the board members. Terms of office are set at four years, except for initially separate terms to allow for staggered terms of office.

Within a designated downtown district, DDAs may deploy flexible tax assessment and increment financing tools, including:

Special Downtown Assessments for Operating Costs

Subject to public hearings and a local ordinance, DDAs in cities of over one million may use proceeds of a one-mill property tax levy on all non-exempt properties located in the designated district. DDAs in cities of under one million may receive proceeds from a similar two-mill levy. Revenues may be only used to cover current operating costs of the DDA and are excluded from municipal tax and debt ceilings.

Tax Increment Financing for Capital Improvements

Authorities may prepare tax increment financing plans for smaller "development area" projects within the downtown district. These plans must include estimates of the fiscal impact on all affected taxing jurisdictions and must be approved by municipal ordinance following public hearings.

Tax increments may include county and school as well as municipal tax base growth within the development area, except that no municipality may pledge more than 80 percent of a project's estimated tax revenues for debt servicing in any one year.

School and county jurisdictions must be "fully informed" of the economic and fiscal impacts of the proposed plan, and be given an opportunity to present their recommendations at public hearings. The authority may enter into agreements with county and school boards to share a portion of the capture tax increments, but it is not required to do so unless specified by the municipal ordinance.

The authority shall spend tax increment revenues for any improvements specified in the approved development area plan. Surplus funds shall revert proportionately to affected local taxing bodies. Tax increment revenues may not be used to circumvent existing local property tax limits.

Municipal Bonds and Guarantees

Authorities may use general obligation bond proceeds to finance and/or guarantee development area projects which plan to use tax increment revenues, subject to state limitations and the 80 percent maximum capture provisions described above. Following a referendum, the municipality may authorize such borrowings by resolution rather than by public ordinance.

Other Funding Sources

The activities of the authority may also be financed through its own borrowings, including revenue bonds, and from the sale, lease, and management income on property it holds. In addition, private property taken by the city under its eminent domain powers may be transferred to the DDA at or below cost, or on other terms the municipality may deem "appropriate." The authority may also act as city agent in matters of land and property assembly.

DDAs may receive any other funds from sources approved by the municipality. Authorities may acquire, improve, construct, operate, and dispose of land and property, and rights and interests therein, within the downtown area. It may collect fees, rent, and charges for use of any property under its control and pledge these revenues for the payment of revenue bonds it issues.

In addition to its development finance tools, DDAs in the Michigan area are also conceived as central business district planners. They are specifically authorized to engage in both long- and short-term economic planning for downtown districts. Project-level planning and proposal studies may be financed out of the special one-mill levy on downtown properties. Eligible project studies and services can thus provide certain "front-end" financing costs, such as design, engineering, and other project feasibility study needs.

Source: National Council for Urban Economic Development, "Update: States and Urban Development" (May 1977).

locational decisions unduly, and that the tax be initiated by or have the support of affected business and neighborhood interests.

Tax Increment Financing

Description

Tax increment financing is a means of financing public investments by capturing incremental increases in tax revenues resulting from a public investment in the area. Judiciously, used, the tax increment technique can greatly expand the financing capability of local transit or development entities. Briefly, the technique works as follows. First, the city "freezes" assessed value of real and/or personal property at the time of the investment within project or district boundaries. Then existing tax revenues continue to flow to taxing jurisdictions (e.g. to the local municipality, county, school districts, special districts), but with increased revenues on rising property values beyond the frozen base being diverted to the agency responsible for financing the improvements.

Beyond this basic framework, however, the use of tax increment financing can be quite varied, depending on state enabling legislation and local laws. For example, a city transit entity could employ tax increment financing in a variety of situations, as shown on Exhibit 6.2, page following.

As noted in this table, there are also a number of methods which may be used to pay for public improvements through tax increment financing. These comprise:

- General Obligation Bonds: Typically a city (or its development agency) issues bonds for proposed improvements. The city retires those bonds with tax increment revenues and pledges its full faith and credit as backup security. Where revenue shortfalls occur, general revenues can supplement tax increment funds in maintaining debt service. General obligation bonds usually have lower interest rates than revenue bonds. However, they typically require voter approval, which may effect the timing of a well conceived and "primed" development package. "GO bonds" may also be subject to municipal debt limitations.
- Tax Allocation Bonds: Here the city pledges projected increases in tax revenues as security. In order to enhance marketability from the affected area, as distinct from its full faith and credit, a city can also make provisions to levy special assessments within the project area if the tax base does not increase as

expected. Revenue bonds offer greater flexibility with respect to timing and municipal debt ceilings; however, they tend to carry higher interest rates, and typically require correspondingly higher debt coverage.

- Pay-As-You-Go: A city can also employ projected increases in tax revenues to finance public improvements on a pay-as-you-go basis. However, the creation of increased value is largely contingent on front-end public investment and may take many years to materialize. Further, this approach does not take advantage of the "multiplier effect" of bonding. For instance, a \$500,000 tax increment has a bonding capability of from \$4,000,000 to \$7,000,000 depending upon interest rates and bond terms.

The following table demonstrates the calculation of tax increment and the associated bonding capability.

TAX INCREMENT FINANCING
TERMINOLOGY AND VARIATIONS

Agents

City Council
 City Planning Office
 Development Commission
 Housing and Redevelopment Commission
 Industrial Development Commission
 Redevelopment Commission

Length of Time for Increment Capture

Open End
 Until Blighted Alleviated
 Set Period
 Example: 30 years/bond issue
 Example: 30 years/project area

Type of Area

Blighted Area
 Development District (no blight determination needed)
 Single Site

Project Completed
 As Soon as Project is Completed
 and Bonds Have Been Paid

Limitations

None
 As a Percentage of Total Land Area of the City
 As a Percentage of Total Tax Base of the City
 As a Set Acreage Figure/City

Financing Methods

General Obligation Bonds
 Full Faith and Credit of Municipality
 Tax Allocation Revenue Bonds
 Credit or Project
 Annual Expenditure

Taxing Jurisdictions Which Are Affected

All
 Some
 Local Municipality
 County
 All Special District
 Schools
 Etc.

No Bonds -- Use Increment Revenue to Finance Improvements

Eligible Development Activities

All Allowed by State and/or Local Law

Property Taxes

Real Property
 Personal Property

Land Assembly
 Relocation
 Demolition
 Site Preparation
 Land Cost Mark-Down
 Street Repair-Construction
 Transit Improvements
 Sidewalk, Curb, and Gutter
 Utilities
 Water and Sewer
 Planning, Engineering, Etc.
 Debt Service
 Etc.

Exhibit 6.3 CALCULATION OF ANNUAL TAX INCREMENT
AND ASSOCIATED BONDING CAPABILITY
HYPOTHETICAL PROJECT AREA

- A. Present Assessed Value $\frac{1}{1}$ = \$20 million
- B. Effective Property Tax Rate $\frac{2}{2}$ = 5 percent
- C. Present Property Tax Revenue $\frac{3}{3}$ = \$1 million
- D. Projected Assessed Value $\frac{4}{4}$ = \$30 million
- E. Projected Property Tax Revenues $\frac{5}{5}$ = \$1.5 million
- F. Projected Tax Increment $\frac{6}{6}$ = \$500,000
- G. Illustrative Bonding Capability $\frac{7}{7}$ = \$5 million

- 1/ Commonly referred to as the "frozen base," determined by a local assessing officer once the site has been designated and boundaries drawn. Typically a tax increment project would be designated by the local legislative body (e.g. council) after public hearings.
- 2/ Refers to actual real estate tax calculated on market value.
- 3/ A x B. Assumes assessed value = 100 percent of market value.
- 4/ Estimated assessed value after substantial redevelopment of the project area.
- 5/ E x B. Assumes same tax rates as at time of project designation.
- 6/ E - C, or tax increment which would be earmarked for transit or development entity. Entity could use this tax increment to offset project costs or to service bonds.
- 7/ Assumes bonding multiplier of 10 times the tax increment; actual multiplier would depend on bond rating, annual interest and term.

Source: Gladstone Associates.

As suggested by the previous exhibit, tax increment financing depends on substantial increases between before and after assessed values, to pay for the major public investments that are typically involved. Hence, public investment (e.g. through improvements or development incentives) must trigger changes in development climate that result in: 1) significant improvements in land use; 2) increased densities; and/or 3) better market performance of existing uses. A possible use of lands designed to catalyze development could be investment in a transit station and/or related transportation improvements.

Experience to Date

The technique requires state and/or local enabling legislation, and thus far about one-third of the states have established tax increment financing statutes or have some under serious consideration. These include ^{1/}:

<u>Established</u>		<u>In Process</u>
Colorado	New Jersey	Arizona
Utah	Connecticut	Kansas
Nevada	Ohio	Florida
California	Minnesota	Nebraska
Oregon	Iowa	
Illinois	Michigan	

This technique has been employed particularly in California where enabling legislation was passed in 1952. Over 200 redevelopment projects have been initiated since then, and over 100 cities and counties rely upon it as a principal tool for financing redevelopment activities.

Experience with use of tax increment financing for transit improvements, however, has been limited. The most notable example is Embarcadero Station in San Francisco, detailed in the accompanying feature box. The project is an excellent example, not only of this financing technique, but of public/private and partnerships in joint development of a significant transit station area.

1/ Source: Eugene Jacobs, attorney specializing in tax increment financing, Los Angeles, California.

TAX INCREMENT FINANCING AT SAN FRANCISCO'S EMBARCADERO STATION

Embarcadero Station in downtown San Francisco is an example of successful tax increment financing in the United States. The project, begun in 1968, is the result of coordination among public, semi-public, and private organizations toward the same goal: the preservation of retail and office vitality along Market Street, the success of a massive redevelopment program located in the downtown (Golden Gateway Redevelopment Area) and the provision of the "best possible and most integrated transit service."

Participating agencies include:

- San Francisco Redevelopment Agency (SFRA)
- Department of City Planning
- San Francisco Transit Task Force (SFTTC)
- Market Street Development Project (MSDP)
- San Francisco Planning and Redevelopment Association (SPUR)
- Technical Advisory Commission (TAC); and
- Bay Area Rapid Transit (BART).

In the early days of BART planning, the construction of only 7 stations was anticipated. Inspections of additional stations located in the downtown area arose in the early 1960's with the beginning of the Golden Gateway Urban Renewal project. The office building boom, previously discussed in the feature box on Market Street (Chapter 5), was symptomatic of the transformation of the downtown area.

Although the city was anxious to see an 8th station at Davis Street, BART resisted these pleas, stating that the extra price would be prohibitive. Eventually the two sides were reconciled in 1966, when they decided to enlarge the (Golden Gateway) redevelopment area to include the station site, and have the Redevelopment Agency issue bonds for the new station's construction. The property tax base in the area was to be frozen and the increases in assessed value were to be used to generate tax revenues in turn to be relinquished to the Agency. The bonds were to be replaced from the expected increased tax revenues occurring around the new station. Hence, the Redevelopment Agency sold \$13.5 million worth of tax increment bonds for the design engineering and shell construction. The balance of the \$29 million total cost was financed by funds transferred from another proposed BART station. Embarcadero Station has been a major feature of the changing Market Street scene in the last 15 years. Its financing is held to have been a success, and it has significantly aided in attracting development to surrounding locations.

Source: Administration and Management Research Association and Office of Midtown Planning and Development, Office of the Mayor, City of New York. Transit Station Area Joint Development: Strategies for Implementation (prepared for the U.S. Department of Transportation: 1976).

Institutional Feasibility

Tax increment financing requires state enabling legislation which has yet to be enacted in a majority of states. This legislation may impose restrictions on the overall size of districts in terms of: 1) total acres, 2) percentage of a city's land area, or 3) percentage of a city's tax base. Also, state statutes have historically restricted the application of tax increment financing to areas determined to be "blighted," usually according to a somewhat narrow legislative definition. This can constitute a significant constraint for use in transit financing, to the extent that areas served by transit are not considered blighted.

It should be noted, though, that this problem has been eased in some jurisdictions over recent years, specifically by relaxing the initial requirement for determination of blight, so as to permit broader applications of the tax increment tool. In Minnesota, for example, the concept has been expanded to include "development districts" where blight need not be determined. The legislation stipulates eligible use of funds which can encompass an array of public programs and improvements including land assembly, relocation, site preparation, planning and administration, provision of parking, infrastructure and utilities, as well as land-cost write-downs.

Further, "blighted area" have often been given liberal definitions -- witness the California Community Redevelopment Law, where the blight definition now extends to areas in disuse due to faulty planning; areas with "depreciated" or "inadequate" tax receipts; land in "unproductive condition," and areas suffering "loss of population."

If enabling legislation is available and does not unduly restrict the application of tax increment financing, the most serious impediments may be of a political nature. The community at large may fear that tax increment financing will result in an erosion of the local tax base which will ultimately necessitate increases in the local tax rate. There has also been difficulty in defining proposed boundaries, and residents of areas not served by transit may object to "subsidizing" transit or transit related improvements. Finally, other competing taxing authorities may be disposed against what will appear a threat to their tax base. In both Minnesota and

California, the states with the most widespread practice of this technique, tax increment financing has engendered considerable controversy. The focal point of opposition has been the impact of frozen assessments on existing taxing jurisdictions, and the related issue of the need to raise tax rates to compensate for a potentially stagnant tax base.^{1/} The following Exhibit 6.4 outlines some of the other important advantages and disadvantages of this technique.

^{1/} A case of such resistance has been experienced in Los Angeles, California. The city council had voted in July 1975 to initiate a tax increment financing plan for the redevelopment of 258 square blocks in the heart of the city. As a result, tax revenues would have been frozen over a substantial portion of the city, notably those areas with the highest assessed values. This major financing feature of the plan was subjected to increasing criticism, on the grounds that it would force homeowners to leave the area, or force them to pay higher taxes to subsidize downtown property owners if they stayed, and in consequence the plan was ultimately dropped from consideration.

SUMMARY TABLE
ADVANTAGES AND DISADVANTAGES
OF TAX INCREMENT FINANCING

Advantages

- 1) Significant front end capital can be raised for development projects that are economically feasible. Such projects usually comprise industrial and commercial development as these land uses tend to produce greater value changes than residential uses.
- 2) When bonds are retired and assessed values are "unfrozen" the local taxing agencies may benefit from an improved tax base and higher tax revenues. If development is only redistributed within a jurisdiction's boundaries, other taxing entities lose tax increments for no longer than the duration of bonded indebtedness.
- 3) Tax allocation bonds, as distinct from general obligation bonds, may not be subject to voter approval and municipal debt limitations. In Minnesota, for example, general obligation bonds need only City Council approval and are not considered under city debt limitations.
- 4) Tax rates do not exceed prevailing property tax burdens. Hence the technique does not serve as any unusual disincentive to development.
- 5) The community does not lose tax revenues in place prior to date of project initiation.
- 6) Improvements are financed, at least in part, from the increased revenues they generate, and thus may reduce need tap general revenues.
- 7) Bond proceeds may be used for a broad range of public activities including matching federal or state grants.
- 8) Property values may increase outside project boundaries resulting in immediate boosts to community tax base.

Disadvantages

- 1) Projected increases in value may not materialize, thus requiring subsidy from a city's general coffers. This suggests a need for well-conceived and economically feasible projects as well as firm developer commitment prior to bond issuance. However, the above does not insure successful completion of development, witness the recent depression in the real estate industry and the demise of even well-conceived projects. A lag may occur between initial public investment and accompanying

private development, or the private development may not occur at all due to changes in market and financial conditions. In California there have been several instances where projected increases in tax base did not materialize; however, actual default has been avoided to date.

- 2) Existing taxing jurisdictions (e.g., schools, cities, counties, and special districts) are subject to frozen tax bases in the project area. Efforts to raise needed future tax revenues will be hampered if large parts of a city's tax base are frozen. Not only are taxing entities deprived of increased revenues (assuming development would have taken place elsewhere within the jurisdiction), they also are deprived of appreciation in real estate values, an important factor where values are inflating at a faster rate than the economy at large. To compensate for impact of frozen tax base, general tax rates can be increased marginally. The total amounts of frozen assessed value may not be significant. In California the amount of frozen assessed value is less than 1 percent of the total in all but two counties (Los Angeles, 1.17 percent, and San Francisco, 1.50 percent). However, higher percentages can be obtained in specific cities and even these percentages can be significant to other taxing entities with small area jurisdictions.

Existing taxing jurisdictions are deprived of the increments until bonds are repaid. Steps can be taken to reduce this adverse effect by sharing the increment with existing authorities or by permitting excess revenues to flow to existing authorities after required coverages are met. Another option is to step up bond payments with excess revenues resulting in earlier retirement of bonds and hence return of increases in tax base to local tax roles.

- 4) Development in the project area will require new expenditures for services not in current municipal budgets. These costs may require subsidization from tax revenues collected outside the project area. Practitioners should include higher anticipated service costs in total project costs and if necessary allocate part of the tax increment to fund increased service demands.

Note: Advantages and disadvantages above are discussed from the perspective of a transit or development entity, and may vary according to viewpoint. Illustratively, a pragmatic consideration to a transit or development entity may be that an advantage of tax allocation bonds is their avoidance of municipal debt limitations. To a city comptroller, however, this attribute may seem a liability of this technique.

Source: Council for Urban Economic Development; Gladstone Associates.

Financing Potential

Revenue productivity depends upon the extent to which value is created in and around transit stop areas. Productivity is a function of the type and intensity of uses attracted relative to existing development, the extent of area covered, and the time period in which tax increment financing can legally occur. It is also limited by prevailing property tax rates. In addition, there are those area and site specific factors that have been previously mentioned as important to the realization of value increases, such as the strength of local real estate markets, suitable zoning and the like.

Typically, the technique is most appropriate for stations where large increases in assessed value are likely to take place. If the market situation is weak and substantial public incentives are required to encourage development, bond proceeds will likely be required for incentives directly related to the developer's performance (e.g., land-cost-write-down, provision of infrastructure, land clearance, and equity participation). In this case, provision of transit is a far more indirect and less effective redevelopment incentive. Therefore, this technique is likely to be appropriate for only a handful of station locations within a transit system, and to be productive for just those specific situations. Anticipated revenues may be pledged as security for bond issuance which provides front-end capital for station development. Tax increments can also be used to finance improvements on a pay-as-you-go basis or through a sinking fund.

Special Benefit Assessment

Description

Special benefit assessment is a means of financing capital improvements by assessing real estate on a basis that relates the levy to benefits received. Capital improvements confer benefits that are both special (local and concentrated) and general (dispersed over a wide area, and shared by large numbers of people). Capital projects vary considerably in the mix of special (private) and general (public) benefits. Increased accessibility around transit stations may result in such special benefits accruing to individual owners through 1) higher land values

resulting from increased development potential, or 2) improved market performance in existing improvements (e.g. higher rents achievable, lower vacancy rates, and increased productivity of retail space). Where benefits are significant and demonstrable, special benefit assessments could be applied to finance a share of the cost of constructing the transit station.

Special benefit assessments can be levied on an ad valorem basis on land (or land and improvements), or could be administered on a unit basis on property owners or local businesses, or on a sliding scale with levels decreasing by distance from the station. In practice, the direct appraisal of value increases is both costly and difficult, and is seldom practiced. In its place, a variety of rules of thumb have been employed to approximate relative benefits received by individual property owners. These include basing assessments upon property front footage, lot area, lot unit or unit connection (e.g., sewer and water connections), appraised value of land, or a combination of above and other factors.

To finance the improvement, a locality frequently issues bonds with the income stream created by special assessments pledged as security. Two types of bonds have commonly been used: 1) special bonds which are backed only by the assessments within the designated district; and 2) special-general bonds which are paid from special assessment proceeds, but in case of delinquency, are serviced from the general revenue fund. Because the latter carry the full faith and credit of the municipality, interest rates are normally lower.

Experience to Date

Special benefit assessment was first applied in this country in New York in 1691. It was widely used in the first thirty years of this century while the nation was urbanizing rapidly and was particularly common in growing cities of the Midwest, South, and West. Special assessment was most often used to provide infrastructure for residential development, such as sewers, streets, curbing and sidewalks. Many of the obligations to finance these improvements were special bonds and thus backed only by assessments against land being primed for development. As the Depression spread across the nation in the 1930's, both assessments and taxes became delinquent, and numerous defaults resulted. To avoid recurrence of defaults, special assessments were viewed with far greater

caution and subjected to more elaborate scrutiny by industry and regulation by government. For example, financial institutions approached these special assessment bonds with far more rigorous underwriting standards, and some state legislature and courts imposed detailed restrictions on such offerings.

Therefore, existing legislation may require some reshaping to accomodate the technique for transit application. California is a pioneer in this regard (see accompanying Feature Box), with two key provisions of recently enacted legislation being as follows:

- Declaration by the legislature that special benefits accrue to property adjacent to a station in or along a route of a municipal transit system, hence the burden is placed on the individual property owner to prove that his land is not specifically benefited.
- Provision in the legislation for zones of benefit, hence permitting flexibility in apportioning costs relative to benefits received.

Nevertheless, no extant examples of special benefit assessment to pay for large-scale transit improvements (e.g. a station stop) were identified in the course of this study. However, recently this technique has been proposed to help finance the Fulton Street Mall in Brooklyn, the South Street Mall in Chicago and transit improvements in New York's Lower Manhattan business district.

Other than the cases in New York City, special benefit assessment has been used to finance a wide variety of capital improvements, many related to the revitalization of downtown commercial areas. These improvements frequently are initiated by, and/or receive the strong support of the local business community. The technique has actually been employed in some 21 projects for downtown malls in the U.S. (listed in Exhibit 6.5). Perhaps the best example of special assessments employed in a downtown setting is Nicollet Mall in Minneapolis (see accompanying Feature Box).

Financing Potential

There are several important constraints which limit the overall revenue productivity of special assessments. Increases in property value or higher productivity may be concentrated in nearby properties, with benefits dropping off

CALIFORNIA'S
SPECIAL BENEFIT ASSESSMENT
STATE ENABLING LEGISLATION

The State of California is a pioneer in this area, its legislature having promulgated comprehensive local transit statutes with a substantial "special benefit assessment" feature as early as 1968. The pertinent provisions are:

- The legislative body of any city or the board of supervisors of any city or county may establish one or more special benefit districts within the city and county pursuant to this chapter.
- Any special benefit district may contain separate zones which may consist of either contiguous or non-contiguous areas of land within the city or city and county. Each zone within a special benefit district shall be an area adjacent to a station of the municipal transportation system or along the route or lines of such system which the legislative body or board of supervisors determines will receive special benefit by reason of the operation of transportation facilities but all zones within a special benefit district need not be adjacent to the same station or adjacent to the same portion of the route or lines.

The California special benefit district legislation performs several important functions. First, it represents a declaration by the legislature that special benefits may accrue to the property along a mass transit line. Although a property owner may claim that his land receives no special benefit, the courts give great weight to this legislative determination. Thus, once the powers herein are granted to the local transit district and that district lays out the special benefit districts, the burden to show that certain land is not specially benefited is placed upon the land owner.

Second, the legislation specifically allows for the creation of several special benefit districts within one transit district (around each transit station). Moreover, each special benefit district itself may contain separate zones. These provisions give the transit district considerable flexibility in apportioning costs in district proportion to benefits. Instead of assessing only property adjacent to the transit station (as in the typical street assessment), the district may set up zones with assessments decreasing in proportion to the district from the transit stop.

Source: Rice Center for Community Design & Research, Los Angeles, Louisville and Chicago: Value Capture and Joint Development Opportunities, 1975.

URBAN PEDESTRIAN MALLS
FINANCED WITH SPECIAL BENEFIT ASSESSMENT
UNITED STATES
1959-1975

<u>Mall Name</u>	<u>Location</u>	<u>Date</u>
1. Kalamazoo Mall	Kalamazoo, Michigan	1959
2. Pomona Mall	Pomona, California	1963
3. Santa Monica Mall	Santa Monica, California	1965
4. Downtown Mall	Riverside, California	1966
5. Gallen Mall	Burbank, California	1967
6. Vermilion Park Mall	Danville, Illinois	1967
7. Nicollet Mall	Minneapolis, Minnesota	1967
8. Downtown Plaza	Freeport, Illinois	1968
9. Franklin Square Mall	Michigan City, Indiana	1968
10. Downtown Plaza	Salisbury, Maryland	1968
11. Downtown Mall	Sacramento, California	1969
12. Landmark Mall	Decatur, Illinois	1970
13. Downtown Mall	Lake Charles, Louisiana	1970
14. Main Street Walkway	Evansville, Indiana	1971
15. Parsons Plaza	Parsons, Kansas	1971
16. Old Capital Plaza	Springfield, Illinois	1971
17. River City Mall	Louisville, Kentucky	1973
18. The Commons	Trenton, New Jersey	1974
19. Michigan Mall	Battle Creek, Michigan	1975
20. Ithaca Commons	Ithaca, New York	1975
21. Penn Square	Reading, Pennsylvania	1975

Source: Roberto Bremilla, Gianni Longo, Virginia Dzarinko, American Urban Malls, A Compendium, Institute for Environmental Action (Washington, D. C., 1977).

NICOLLET MALL
MINNEAPOLIS, MINNESOTA

Nicollet Mall, located in Nicollet Avenue between Washington Avenue and 10th Street in Minneapolis, is an 8 block, 270,000 square foot, winding, park-like mall, adorned with trees, flower boxes, bus shelters, benches, fountains, and sculpture. Traffic is limited to buses, taxicabs (which must travel the full length and cannot pass any bus), and mini-buses, which carry shoppers from one end of the shopping district to the other for only ten cents. This is the main avenue of the shopping district, lined with large department stores, specialty shops, and several excellent hotels.

Physical Design Concept

The meandering curvature of the transit way was intended to mitigate the "endless vista" of the typical American street, giving changing views as one progresses, and changing spaces as the width varies. Lawrence Halprin, who did the landscape design, saw the Mall as a return to the liveliness of the medieval street. Instead of the customary 60 feet for traffic, Nicollet Mall uses only 24 feet. The remainder is for pedestrians, in strips that are occasionally as wide as 36 feet on a side.

The design is a conscious effort to preserve the street's character. The new elements were chosen to relate, not to appear as a superimposed design. Surfaces are therefore hard, materials durable (copper, bronze, granite), with planting space. Involvement by people — places to sit, art objects to enjoy — was a prime consideration. Sitting areas have paving of granite and brick; walking areas have special textured terrazzo made to withstand extremes of temperature.

The 16 bus shelters are heated by infarred radiation, and incorporate controls for the snow-melting equipment embedded in all sidewalks.

Unity of design is achieved through the "micro-architecture" and street furniture (bus shelters, kiosks, benches, bollards, curbs, paving, planters, lighting, drinking fountains, traffic signals, litter baskets) — all the same for the 8 block length. There is variety in "special events" like the self-service post office and several one-of-a-kind fountains and sculptures.

Operating History

After 6 years of operation, the Mall is successful. The availability of 39,736 downtown parking spaces has been an essential factor in this success. There has been an estimated \$225 million in new construction and rehabilitation since the planning began. Business is up as much as 14 percent, pedestrian traffic is up, shopper acceptance is high.

Cost

The construction cost of \$3,875,000 was financed as follows:

Urban Mass Transportation Demonstration Grant	\$ 512,000
Urban Beautification Grant	\$ 438,500
Bond Issue	\$2,751,785

The bond issue, to be redeemed by assessment on property located within 300 feet of the Mall, was based on a complicated assessment formula, based partly on frontage, partly on square footage (depending on eastward distance from the Mall), and partly on nearness to the Mall's center along its north-south axis. The final assessment scheme allocated to frontage owners more than half of the total assessment, while properties off the mall bore the remainder. The plan included two benefit zones — on the Mall and off the Mall — covering some 18 blocks, and with each zone having sectors providing for 100 percent, 100-75 percent, 75-50 percent, and 50 percent allocation of costs, so that properties closest to the center of the Mall would bear the greatest proportion of both construction and maintenance expense.

Of the \$3,875,000 total costs, only \$1.3 million is visible above ground.

Construction Complications

Virtually the entire space under the 80-foot right-of-way was occupied by utilities: main power transmission equipment of the Northern States Power Company, Northwestern Bell's trunk lines, a system of mains of the Minneapolis Gas Company, Western Union ducts, two major water mains and three sewer lines.

Each of these had service connections into various buildings fronting the street. The configuration of the utilities and their need for access became a determining factor in arrangement of surface facilities and special features, since if the Mall were to remain as undisturbed as possible over time, all underground systems would have to be brought into first class shape.

The private companies agreed to inspect their systems and rework them as necessary, with the understanding that street openings in future years would be held to a minimum. The City undertook extensive replacement and reconnection of water services and other City facilities. Other intricate work was required to provide for relocation of fire hydrants and for treatment of electric circuitry. Ultimately, the design required a complete new system of modern traffic signalization.

Many of the building frontings on Nicollet Avenue have basement areas that projected out under the street right-of-way. These required extensive reworking, with the existent load-bearing walls becoming key factors in surface design. Space

had to be found underground to accomodate auxiliary equipment necessary for the operation of fountains, drinking water coolers and plant irrigation systems. Drainage structures were doubled, and new elevation for the street with its transit lanes and mall treatment were established.

Because of extremely tight relationships between underground conditions and the desired surface arrangements, plans had to be developed on the basis of construction sequence: first, all work on underground utilities and services; second, areaways; third, foundations, curbs and gutters; fourth and fifth, general electrical work and traffic signals; sixth, dimensioning of concrete slabs and types of joints; seventh, snow-melting plans, with the location and configuration of each snow-melting mat; and eighth and ninth, placement of special above-ground features, paving and plant materials.

Timetable

Project conceived in 1956; construction started in April, 1966; completed in November, 1967.

Developer

Department of Public Works, City of Minnesota (city acted as general contractor; successful bids were taken from private suppliers and subcontractors for all but 30 percent of the total project cost).

Source: ULI - The Urban Land Institute; Minneapolis Project Brochure (Spring 1973).

sharply with increased distance from the facility. Thus, only a very limited portion of a city's tax base can be tapped by this technique, indicating a markedly lower revenue potential than the property tax, for example, which has a larger geographic scope for application. Further, it can be used only in certain favorable transit situations (i.e. where land value is significantly increased, or market performance improved). Thus, it is applicable only at stations having significant existing or potential commercial development.

Special assessment theory requires that the cost of the facility be borne in proportion to relative benefits received. However, increased property values (and improved market performance) are attributable to a host of factors. The benefits resulting directly from improved transit access are difficult to measure, which complicates the definition of district boundaries and measurement of benefits. Benefits vary considerably not only as a function of distance, but also by size and shape of parcel, neighborhood effects and current use.

Due to the difficulty of appraising benefits on an individual parcel basis, crude formulas are typically employed. While certain irregularities are bound to arise, these formulas have served in many instances in the past and could be adapted to transit situations in the future. Recent experience for financing downtown improvements should be useful in this regard. A particularly relevant approach is through tiered benefit zones, as used to finance Nicollet Mall. Such tiers permit varying degrees of benefits to be determined not only by distance but by other factors, including location on a block, lot size land use and so forth.

Assessments must also be viewed within the overall market context. Where development is proposed or expected, special assessments, if too stiff, could actually be a development disincentive, encouraging location outside the benefit zones. Likewise, assessments on existing commercial districts in excess of expected benefits accruing to property owners or businesses there are also certain to face a strong resistance.

Institutional Feasibility

Apparently, the use of special benefit assessments for purposes of financing suburban subdivisions has been declining in popularity since their widespread

application in the first part of the century. Bond sale is still hampered today by lingering distaste brought about by the defaults of the 1930's. Also, developers are required to install more and more improvements themselves and recoup costs through land sales, and special assessments are not deductible for federal income tax purposes. From the public sector's side, local governments frequently find it easier to raise the overall real estate tax rate marginally, rather than impose stiffer special assessments on a limited number of property owners.

The principal of special assessments calls for a direct linkage between benefits received and the amount of assessment. In the case of a residential improvement that is highly local in character (e.g. a sidewalk or street) it is unquestioned that initial and ensuing property owners will benefit. However, transit linkages are far more problematic. Projected benefits for transit development may be delayed or not materialize at all. There is no guarantee that development will be induced, or take place on schedule, as development is subject to a range of other factors unaccountable for by transit improvements alone. In other words, the benefit is not improved accessibility but the impact of improved accessibility on land values or market performance. For this reason, special assessments are best suited when benefits of transit improvements can directly be linked to adjoining property owners. These improvements could include transit malls, pedestrian improvements, and other appurtenances designed to improve overall access to transportation from surrounding development.

Special benefit assessment has a long history in this country and widespread application. The legislative authority is currently in place, and its use for traditional purposes is well established and unchallenged.

Further, there is increasing precedent for the expansion of eligible facilities and uses. Witness New York State's Town Law, Section 190, which authorizes special assessment districts for drainage, parks, public parking, lighting, snow removal, refuse and garbage collection, parking and beach erosion control. This legislation has been extended to include parking garages for central business districts and other uses of the technique for downtown revitalization (e.g. parks, garages, walks) and to provide additional precedent for levying assessments on the basis of general location near a public facility.

Service Charges

Description

In this technique, properties adjacent to transit stations are presumed to benefit from their locations and are charged a fee, sometimes to retain this privilege in the course of building a renovating transit system, or at others to perform certain services. The fee is paid by the developer to the transit authority or appropriate government entity, and may be paid annually at a predetermined amount, or in a lump sum.

These charges could be arranged as part of transit access agreements, and are comparable to payments made when an individual property is connected to a water or sewer system. If, for example, a private party wanted an underground passageway that would provide direct access to the station, it might have to pay such a sum. Service charges could conceivably be applied to all adjacent property owners, though this broader approach has yet to be tried.

Experience to Date

London has used service charges to some extent, and its example has proliferated to Canada, but is much more rare in the United States. Toronto, Canada, is a case of the evolution and use of service charges, typically through cost-sharing arrangements negotiated as part of transit access agreements. Cost-sharing in such cases, can extend from private sector payment for certain capital items (e.g. a pedestrian concourse to the transit station) to an annual contribution to certain operating costs (e.g. over specified areas of a transit station).

The Toronto Transit Commission normally makes direct access to their subway available at no charge, but requires connecting property owners to pay all capital costs of extending pedestrian ways, whether at or below grade, to the transit station. Transit access agreements between TTC and an adjacent property owner cover the allocation of capital costs for the connection, details of operation, maintenance responsibilities, legal liability, and so forth. It endures for an indefinite term, but can be altered by either party, with the party requesting a change paying its cost.

At first the TTC encountered a certain amount of resistance to this proposition. In the 1950's it was turned down by all but Toronto's two major

ROCKEFELLER CENTER: THE EVOLUTION
OF ACCESS AGREEMENTS

1940-1970

Rockefeller Center is presently a giant complex of some 21 buildings, 17 million square feet of office space, restaurants, garages, and the amenities of the New York Hilton. It developed essentially in two stages, from 1931 to 1940, and from 1946 to the present; the transit access agreements gradually evolving such that the Center assumes more and more financial responsibility for access to the Sixth Avenue subway station.

In 1946, the Center acquiesced to providing transit passenger access to the street by 5 off-street entrances. It engaged to pay the full costs of constructing and maintaining the entrances.

Matters advanced in 1958, when the Center agreed to revamp and operate the Sixth Avenue subway's northern portion. In addition they leased and maintained the concession areas. The charge was an annual one of \$75,000, plus 50 percent of concession income above the first \$100,000.

Further, transit agreements were negotiated in the 1970's on access into the subway mezzanine for the McGraw Hill, Exxon, and Celanese Buildings. Rockefeller Center again offered to pay for necessary improvements, some of which were rejected because of technical problems. This impasse in the negotiation indicates the difficulties to be surmounted in discussion between developers and transit entities.

Source: Administration and Management Research Association and Office of Midtown Planning and Development, Office of the Mayor, City of New York. Transit Station Area Joint Development: Strategies for Implementation Executive Summary and Final Report (prepared for the U.S. Department of Transportation: 1976).

department stores. During the next decade, developers began to consider the manifest advantages of transit access to those stores, and expressed interest in connecting -- but at TTC's expense! Matters have changed significantly in the 1970's, to the point where developers evince interest in connecting to the subway five years ahead of the completion date, and are willing to pay the charge on connection. For the 1980's, TTC anticipates that developers will be contributing to the actual station costs.

There are some analogous U.S. examples of cost-sharing and service charges in transit access agreements, such as New York's Rockefeller Center (see Feature Box) and Citicorp Center. Service charges have further been a feature of the proposals to UMTA for Downtown People Mover systems. For example, St. Paul has suggested using service charges to help recover the financial costs of station construction.

Service charges which are structured through transit access agreements can also cover the operation of subway concessions. These may be operated by the developer (e.g. with an annual charge going to the transit entity), or by the transit entity itself (e.g. with rentals on a percentage basis). In the case of Toronto, this percentage ranges from 6-9 percent of gross receipts and yields an annual revenue stream to TTC on the order of \$600,000 at present. Toronto also formulates its access agreements such that adjacent property owners are precluded from establishing competing retail uses except beyond a specified radius from the transit station mezzanine.

Financing Potential

Returning again to the Toronto example, recent connection costs to developers have been on the order of \$250,000-\$750,000 per connection. In other instances, with other agreements, this would vary according to the services performed. St. Paul estimates that the revenue produced from the service charges they propose would amount to a lump sum of \$600,000 per station for four of the DPM's proposed stops.

Institutional Feasibility

To a large extent the use of service charges depends on the city's ability to

encourage developer acceptance in terms of the demonstrated benefits accruing to each. Developers in the past have been reluctant to engage in the charges and responsibilities involved in station maintenance, and tend to await the success or failure of those few projects that have employed these devices. Furthermore, in the U.S. transit access agreements are often no easy affair to negotiate, as may be observed in the protracted dealings between Citicorp and New York City's transit entity.

In order to encourage such acceptance and sharing costs, with property owners, it might be of utility in a transit access agreement to differentiate two types of transit stations entrances. The first, the "designated" entrance, would be open at all times, and the agreement would reflect the added costs for maintenance, servicing and operating it. The second, a "development" entrance, would be open at limited hours and designed for the convenience of the owner and/or his tenants. This could result in a value of greater cost-sharing, particularly for the initial capital costs, as it would be to the advantage of the particular developer.

Literature on Taxes, Assessments and Service Charges

By and large, no convenient summary is available of all the techniques, much less case studies of successful experiences. Individual techniques, though, are treated in a number of separate publications by professional groups, and in the usual array of journal articles, summarized in the feature box following.

KEY TAXES, ASSESSMENTS AND CHARGES LITERATURE

Administration and Management Research Association and Office of Midtown Planning and Development, Office of the Mayor, City of New York. Transit Station Area Joint Development: Strategies for Implementation Executive Summary and Final Report (prepared for the U.S. Department of Transportation: 1976). A major research report which addresses the practical means of transit station area joint development implementation. It outlines a number of financing techniques including: property tax, special assessments, supplementary land acquisition and public assumption of risk, special capital improvements, tax increment financing, loans and guarantees, equity participation and direct public investment.

Anderson, Ralph and Associates. A Report, Analysis, and Recommendations for Legislative Change in Redevelopment Practice and Particularly Tax Increment Financing in California. (Sacramento: 1976). The first comprehensive analysis of tax-increment financing on a state-wide basis. The report reviews the experience to date of this technique in California.

Barton-Aschman Associates, Inc. Tax Increment Financing of Urban Redevelopment (proceedings of a conference sponsored by the City of Chicago Department of Development and Planning and the City of Rockford Department of Development: 1974). Transcription of a conference devoted to tax increment financing and its relationship to development and planning.

Chamber of Commerce of the United States. Downtown Redevelopment 1974. A survey of innovative financing techniques in downtown redevelopment. Brief case studies are presented.

Fisher, Glenn W. Financing Local Improvements by Special Assessment. (Chicago: Municipal Finance Officers Association, 1974). A solid introduction to special assessment financing. Presents a historical background and discussion of the legal and economic theory of special assessments. Sections include: the use of special assessments; administrative procedures; and the allocation of costs between public and private sectors, as well as among beneficiaries of public improvements. A selected bibliography lists almost 60 entries.

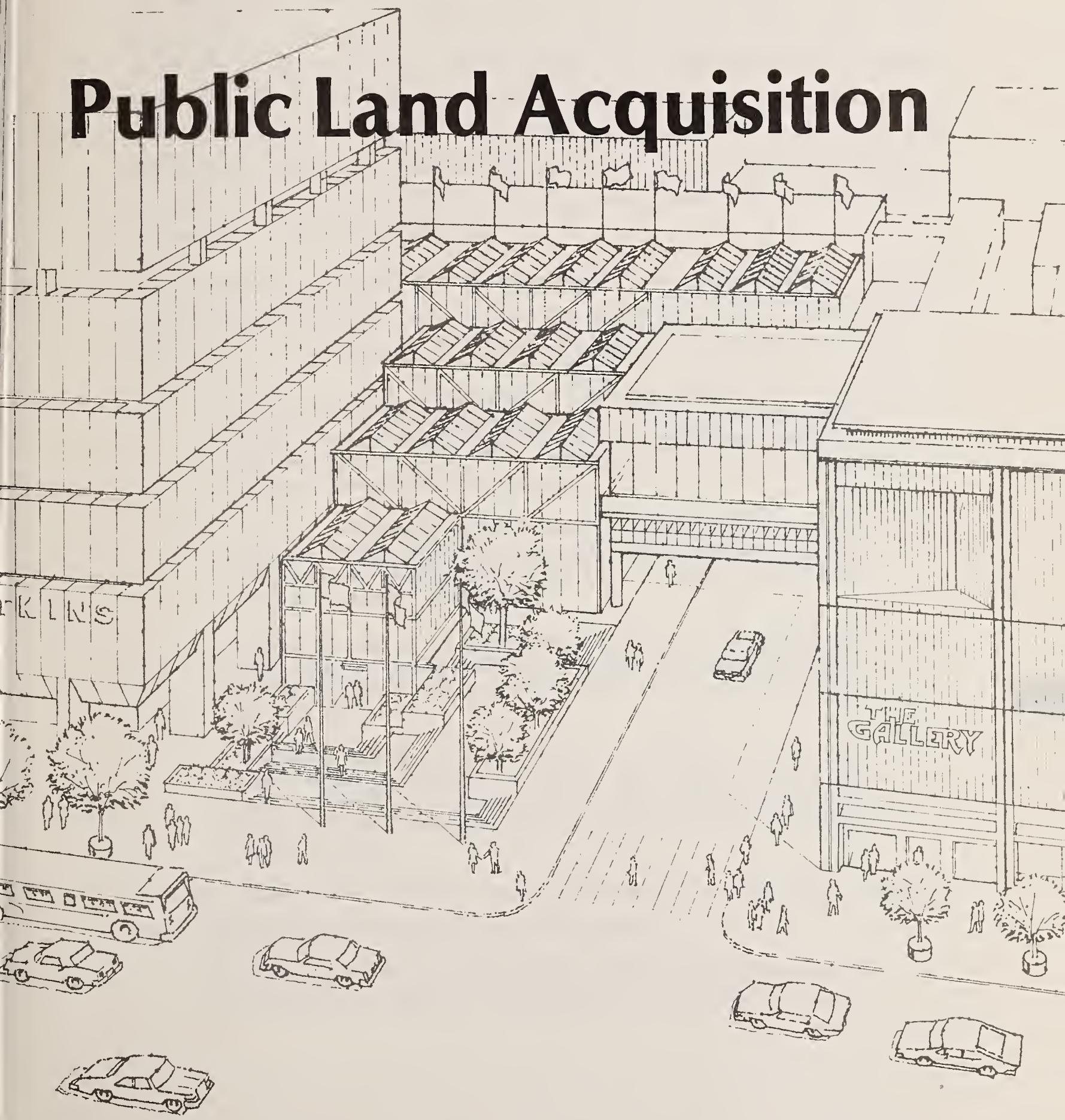
National Council for Urban Economic Development. "Tax Increment Financing," in Information Service, Number 1, September, 1975. This key introductory document reviews experience to date and includes a brief bibliography and list of information sources, including knowledgeable practitioners who may be contacted for further information.

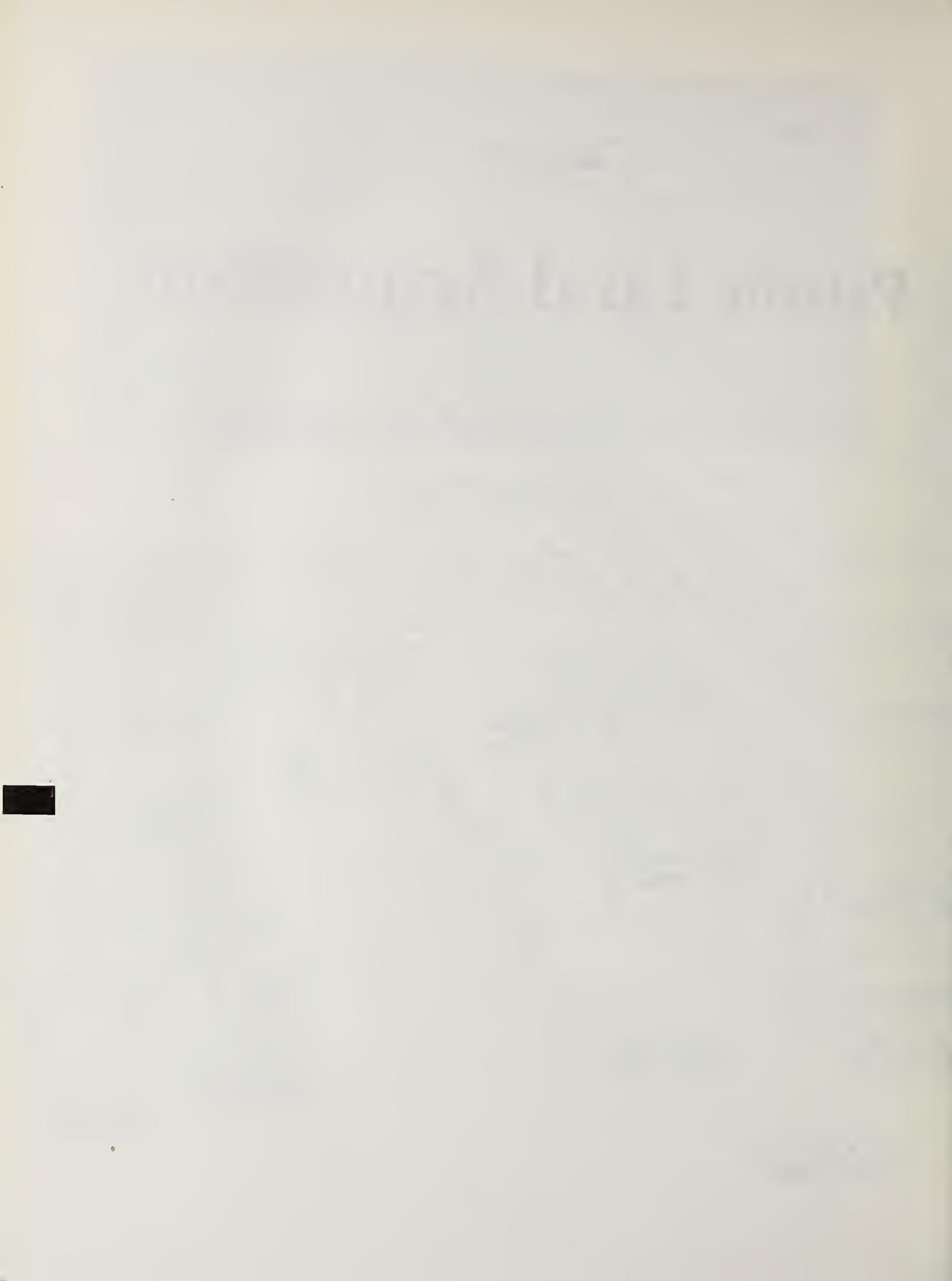
University of Oregon, Bureau of Governmental Research and Service,
Financing Local Improvements by Special Assessment: The Policies,
Practices, and Procedures of Oregon Cities and Counties. 1973.

Trimble, Gerald, M. "Regrowth in Pasadena," in Urban Land 36(1): 4-14, 1977. A current case study of a large-scale downtown (3,000 acres) redevelopment plan implemented by a local, private agency. Source of revenue included loans from the city, promissory notes, tax allocation bonds and lease revenue bonds. Special attention is given to tax increment financing.

Chapter 7:

Public Land Acquisition





PUBLIC LAND ACQUISITION

This chapter explores several techniques involving public acquisition of land, its development possibilities and issues associated the process. The common denominator in this approach is usually that a public transit or development entity acquires real property or related development rights. Beyond this basic ingredient, the techniques in this category can vary considerably, just as do the scope and means of acquisition. However, public land acquisition raises some serious legal and political issues that range from the equitable exercises of eminent domain to the right of the acquiring entity to deal in real property, all of which dim the prospects for widespread application.

Accordingly, we have organized the current possibilities into four techniques that reflect important differences in both an entity's responsibilities and functions, and the legal requirements which must be satisfied before exercising this role:

- Lease or sell air (including subsurface) rights: the most commonly employed technique in this category, and one which usually does not require supplemental condemnation powers, but only the right of a transit or development entity to deal in transportation-related real property;
- Lease or sell supplemental property: unlike the above, this technique requires statutory approval -- and sometimes judicial sanction -- to acquire more land than is actually needed to create the transit improvement;
- Develop air rights or supplemental property: this technique usually requires the legal authority to engage in both supplemental acquisition and property development for income producing purposes; and
- Participate in supplemental property development: this technique involves the transit or development entity contributing equity (e.g. land) or extending loans or loan guarantees as part of project financing, thus assuming an explicit share of development risks and returns.

Of course, these techniques as outlined above are substantially simplified from "real world" situations in the following respects:

- typically, the transit or development entity is constrained as to the extent and character of development it can engage in (e.g. to

transportation related facilities around transit stops);

- as a rule, the entity is also constrained as to when and how it utilizes property (e.g. disposal of property at some future date may need to meet appropriate public purposes and/or be sold subject to specific use conditions); and
- finally, a combination of these techniques can be employed (e.g. lease of air rights, then participation in adjacent property development), particularly for complicated joint development projects.

With these caveats, it is nonetheless possible to examine the applications of various techniques in this category.

Lease or Sale of Air Rights

Description

At one time, transit entities acquired only that land required for system development, and land within the approved right-of-way was in turn used primarily for transit purposes. Nevertheless, land controlled by the entity in certain circumstances may have value beyond its purely transit use. Land resources within the approved right-of-way include air and sub-surface rights connected with station and guideway, and any adjoining land (e.g. odd-sized parcels on excess land surrounding a station). This value can be realized through lease or sale of air rights or disposal of remnant parcels not required for the transit improvement.

Experience to Date

Practice has been centered over railroad yards and some highways; there has been relatively little experience related to mass transit. The earliest examples of this technique stem from the lease or sale of air rights by the privately owned railroads, such as those of New York Central (over Park Avenue and Grand Central Station) and Illinois Central. With respect to highway air rights, the George Washington Bridge Apartments (1955-1962) illustrate the possible success of air rights sales. They were built over the expressway, after the New York Port Authority had sold its air rights at a public auction for \$1,065,000. A recent notable exception to both the common practice of selling air rights, and the non-participation of transit entities in increasing property values, is an office - retail

complex on air rights over Metro's Farragut North Station at Connecticut and L Streets in Washington, D.C. The transit entity in this case leases air rights to the developer, who pays a specified base rent and beyond that a percentage based on the project's economic performance.

Financing Potentials

This technique has several important advantages over other techniques discussed later in this chapter. It does not require the transit agency to raise additional capital as the asset is already owned. This contrasts with leasing or selling of supplemental land or developing adjacent land or air rights, which require significant front-end capital. Rather than further draining resources of the transit entity while it is facing its peak requirements for capital, this technique is capable of producing front-end revenue either through sale, or (possibly) through bonds secured by projected ground or air rights lease payments.

Second, it does not require extensive experience in real estate development. Lease or sale of air rights can probably be accomplished by the transit or development entity staff with a modest addition to professional in-house or consulting skills, notably in real property disposition and management methods. The technique does not require excess or supplemental condemnation authority, only the right of the transit or development entity to deal in transit related real property for income producing purposes.

Finally, a lease or sale transfers risks to private interests. While risk is transferred to the private sector, however, the real estate project carries risks associated with corporate real estate activities and the income stream has uncertainty attached. For example, expected increased values may not materialize, markets may shift and so forth.

Of the two methods, lease or sale, long term leasing of transit related rights appears generally the most satisfactory means from a financial standpoint since sale of air rights may preclude a public capture of value over time. Under leasing, value appreciation can be realized through escalator or reappraisal clauses, or percentage leases that permit the public sector to share increases in productivity (e.g. higher sales per square foot in a retail establishment).

Institutional Feasibility

Despite these advantages, this technique has constraints which limit its applicability. First, leasing of air rights is a novel technique in some communities and presents complicated legal and appraisal issues. Transit entities will likely require additions to professional or consulting staff, particularly when negotiating leases that allow the public sector to share in land appreciation. Likewise, the private sector may also lack sophistication with air rights development. Developers or financial institutions may be reluctant to commit to air rights proposals. also, bonds backed by air rights lease payments are probably not sufficient security for publicly marketed issues.

A second constraining factor is the need to develop significant commercial uses in order to generate sufficient revenue to warrant transit-entity interest. Private interest in air rights development depends upon favorable market and development factors, which may be in place at a sufficient scale in only several of a system's station locations. Further, air rights construction costs are typically high relative to land values and construction costs on nearby alternative sites. This further narrows the range of potential sites for air rights development.

Legal restrictions on transit or development entities may also limit flexibility. For example, the transit entity may not have the power to sell or lease property or air rights. Other possible requirements include that land be used for an appropriate public purpose and for specific use conditions (e.g. conditions of sale rights).

Finally, a still more critical constraint, given the high costs of air rights construction, is that relatively few air rights projects are economically feasible at the present time. Otherwise stated, even if real estate and financial practitioners are sophisticated in air rights, the transit or development entity is willing and able to encourage such projects, and all legal requirements are satisfied, few cities are so densely developed that land becomes sufficiently scarce and costly to justify air rights construction.

Lease or Sale of "Supplemental" Property

Description

This technique, and the following which involves actual construction of the development project, requires a broadened land acquisition program. While leasing air rights relies upon land assets already acquired for transit purposes, this technique requires public acquisition of land not actually needed for transit operations.

Experience to Date

Perhaps as many as one third of general local governments engage in some form of supplemental acquisition and have been doing so for the past two decades. Programs are generally small, and designed primarily to acquire land for such purposes as schools, parks, fire stations and government buildings. Transportation purposes have most often involved supplemental land acquisition for highway construction; this includes highway programs in Arizona, Florida, Kentucky, Maryland, New Jersey, California. The major transit application, discussed in Chapter 2, was Toronto, Canada (where the purchasing agency was the Toronto Transit Commission, up to the mid-1950's). In sum, large-scale cases of advance acquisition of supplemental property in conjunction with transit construction are rare.

Financing Potential

There are some possibilities for financing from this technique. It could eventually provide some cash flow, which should be measured against the amount of public capital required to ascertain return on investment. Usually, cash flow would be deferred for several years beyond commencement of transit service since it may take this amount of time to bring to fruition development projects using the supplemental property. Cash flow, of course, may also depend on the terms of the lease or sale and attendant take-down provisions for the land. On the other hand, until the sale price reaches an amount that would give it a better return on its investment.

Even though the purpose of supplemental acquisition is to permit the public sector to share in appreciation of land resulting from transit investments, given the

position of austerity confronting most transit entities where transit systems in the planning stage or under construction face truncation, it is unlikely that funds could be freed for excess land acquisition. Investment in "raw" (i.e. unimproved) land tends to be the most risky form of real estate. Risk is associated with a host of factors including the possibility of shifting demand and locational preferences, zoning availability, and other public investments decisions (e.g., provision of infrastructure).

There is no evidence to indicate that public entities, as a rule, are able to take advantage of land appreciation through proper timing of purchase and disposition. Indeed, the opposite is likely. For a program to succeed, land must be bought at "before transit improvement" prices. However, the public sector frequently pays more for land than a private individual would in similar circumstances.

This phenomenon is a result of a completely different set of objectives, and methods of operation. For example, the public sector does not have the option of acquiring land on a sub rosa basis, and condemnation proceedings tend to be both lengthy and costly. Even public announcement of intent to locate a station is likely to stir speculation, and the price of land may rise before the public entity has time to get involved. Also, the public sector may be required to pay substantial relocation costs, particularly where federal funds are involved (see Provisions of Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, P.L. 91646). In summary, government typically does not have the real estate expertise or administrative flexibility to capitalize on ambitious programs of land acquisition with the intention of "profit-making."

Finally, of course, this technique requires more front-end capital than is needed for acquisition of right-of-way alone. This poses even greater problems of competing for scarce fiscal resources available to the transit entity. Also, the public sector, by developing rather than leasing or selling a property, assumes risks associated with comparable real estate activities. Return on investment can be drastically altered through changes in real estate markets and other related factors which could reduce land values, absorption rates or occupancy levels.

Accordingly, these capital investments must be carefully analyzed internally and externally. Internally, a supplemental acquisition program should make sense given standard investment criteria including: reliability of income stream; potential for capital appreciation; degree of certainty of realizing future income; liquidity; and management costs. Externally, the project, in addition to passing tests of cost and benefit, must be compared with alternative uses of capital (opportunity cost) most important of which may be funds for completion of the transit system. It may also have to meet borrowing limitations on local transit entities which are likely to be already strained to the limits to finance a transit system.

Institutional Feasibility

There are important legal restrictions relating to the definition of "public purpose," and the local public sector's authority to acquire and dispose of supplemental property.

For a municipality to purchase or condemn "excess" land, it must be acting in a legitimate public purpose. In recent decades, the concept of "public purpose" has been greatly expanded. A prime example is enabling legislation authorizing condemnation of blighted properties for renewal purposes, enacted in virtually every state subsequent to the Housing Act of 1949.

Courts typically require either explicit or implicit statutory declaration of public purpose upon which eminent domain powers are based. To extend this concept to transit, a need may exist for enabling legislation which declares planning and development of transit station areas a public purpose and identifies purchase of the transit station area property as a specific municipal or agency power. Moreover, the entity may be constrained by a requirement to accord priority to public purposes in the disposition of property. For instance, the property may be subject to stringent restrictions on subsequent use which further hamper the flexibility of the entity in embarking on a disposition program.

An examination of the legal principles governing supplemental condemnation indicates that eminent domain usually cannot be used for the sole purpose of dealing in land. The further the land is from the station the more legally tenuous

becomes any application of condemnation powers. However, there is judicial support for incidental profit-making in the course of exercising legitimate condemnation powers. There are four main precedents for use of supplemental condemnation:

- supplemental land condemnation essential to the successful operation of a public facility (e.g. supplemental land for parking and related facilities which can be leased to private operators);
- supplemental condemnation for future expansion and use, and subsequent disposition of surplus property;
- supplemental condemnation to protect public investment; and
- supplemental condemnation when remnants are rendered valueless by public condemnation of a major portion of a parcel.

These exceptions apparently do not provide judicial precedent for an ambitious program of land acquisition with the intent of selling land for a profit. (See accompanying Feature Box on Supplemental Land Acquisition.)

SUPPLEMENTAL LAND ACQUISITION

A number of jurisdictions have upheld supplemental condemnations. Generally such schemes have had their bases in either a constitutional or statutory provision. These provisions fall roughly into four categories:

- 1) Supplemental Condemnation Essential to the Successful Operation of a Public Facility. Supplemental condemnation has been allowed when it is established that the purposes for which the land is acquired are reasonably essential to the operation of a municipal or special district facility. One of the clearest statements of this principle is in *Atwood vs. Willacy County Navigation District*. There, 1760 acres of plaintiff's land were condemned by the Navigation District for a port and supporting facilities as part of a plan to develop the navigable waters of the state, all pursuant to express statutory authority. The supplemental condemnation of land that is reasonably essential to the successful operation of a transit district would not be restricted to condemnation of the transit right-of-way but would be able to condemn supplemental land for parking and other related facilities.
- 2) Supplemental Condemnation for Future Use and the Subsequent Disposition of Surplus Property. There is a line of cases authorizing supplemental condemnation for future expansion and use. Moreover, several cases recognize the right of a condemning authority to utilize the land temporarily in an income producing manner, and further, to sell the land for profit should it become unnecessary to the project. As in other supplemental condemnation cases, great stress is placed upon state constitutional provisions and enabling statutes that set forth in detail the powers and duties of the public body involved.

One line of cases dealing with supplemental condemnation for future use begins with the Supreme Court decision in *Ringue County vs. County of Los Angeles* in which the Court said:

"Public road systems, it is manifest must frequently be constructed in installments, especially where adjoining counties are involved. In determining whether the taking of property is necessary for public use not only the present demands of the public, but those which may be fairly anticipated in the future, may be considered."

The only limitation to the rule set forth here is that the use be "reasonably" or "fairly" anticipated in the foreseeable future. A transit district can enhance its ability to condemn in this fashion by acting in accordance with definite, comprehensive plans and

projections for future development of its facility. Of course, the legislature should specifically permit the district to lease that property in the interim for private use.

- 3) The Protective Theory of Supplemental Condemnation. This theory could enable a city owning land adjacent to a transit stop to sell it under restrictions that would preserve the beauty of, or at least reduce the blight caused by the transit system, and thereby facilitate an increase in the value of the surrounding property.
- 4) The Remnant Theory of Supplemental Condemnation. By requiring that an agency take only as much land as is needed for a street or other purpose, fragments of lots often remain of such size and shape as to render them individually valueless. The city or other condemning authority must then pay for the whole lot even though it acquires title only to a part. Since the remaining lots are valueless, the city would thereafter be deprived of taxes on this property. While the remnant theory alone will not provide a very useful mechanism for acquiring large segment of land around a transit stop in order to control development, used in conjunction with other concepts discussed herein it may provide sufficient land to more or less "fill in the gaps."

Some state constitutions specifically authorized condemnation of remnants. A California statute permitting condemnation of remnants was construed and upheld in *People vs. Superior Court*. The Supreme Court of California held that even a "remnant" as large as 51 acres could be condemned.

Source: David Callies and Christopher J. Duerksen, "Value Recapture as a Source of Funds to Finance Public Projects," in Urban Law Annual (Vol. 8:73, 1974), pp. 77-89.

Finally, and quite apart from legal constraints, the administrative resources to conceive, execute and manage an ambitious supplemental land acquisition program do not exist in most transit and development entities in the U.S. The costs and delays involved in passing the needed legislation for an organization that may not exist, in its establishment, in its integration and smooth functioning within the local government, could prove to be prohibitive.

Development of Air Rights or Supplemental Property

Description

With this technique, the transit entity has the option of developing air rights and/or adjacent property, assuming in this latter connection that the hurdles placed on the path to acquiring supplemental property are cleared. The entity's "line of business" could conceivably be quite varied; it could range from developing revenue producing properties on air rights over the right-of-way and station stop, to larger ventures on supplemental property in adjacent areas. Or, the entity could engage in coordinated development with other public or private entities.

Experience to Date

Transit entities have generally been reluctant to get directly involved in commercial real estate development, particularly large-scale, expensive projects. An atypical exception is the World Trade Center in New York, which was undertaken by the Port Authority of New York and New Jersey, and completed in 1973. The Port Authority now owns and operates the center, which consists of two giant 110-story office towers, two-story plaza buildings and an eight-story U.S. Customs Service facility. As a public entity, the Port Authority pays a small sum in lieu of taxes.

The Gallery in Philadelphia is another recent example of a publicly developed project. In this case the City's Redevelopment Authority served as general contractor for a 4-level, 200,000 sq.ft. retail mall, designed to revitalize the downtown area, between Strawbridge & Clothier's and a new Gimbels department store. The city developed the mall, then leased it to the developer. Although there are other examples of the city actually managing construction when private contractors could or would not (Nicollet Mall in Minneapolis is a case in point), they

are usually special circumstances in pursuit of specific city goals (e.g. downtown redevelopment) rather than profit realization per se.

Financing Potentials

As in certain previous techniques, this one can provide cash flow, depending on the type and scale of land development, usually on a deferred basis. Financial potentials, however, hinge on return on public investment. In this connection, the limited number of large-scale projects actually provide but inconclusive evidence. The World Trade Center, for instance, cost some \$900 million to construct to date, but operates with a \$8 million yearly deficit. The Port Authority, however, is a transit entity that is usually considered able to market the bonds necessary to fund and continue this project. The stability and marketability for bonding of a project, though, would be an insurmountable obstacle for most developments.

Institutional Feasibility

Most transit or development entities lack sufficient statutory authority and legal precedents from local courts — much less agency policies and procedures -- to directly engage in real estate development, except in urban renewal areas. Further, development rests either upon acquiring supplemental land or utilizing air rights. Risks associated with these techniques have been detailed earlier in this chapter, and further compound the list of constraining factors.

Participate in Supplemental Property Development

Description

Techniques in this category comprise a broad spectrum of means to participate in property development by providing some part of project financing for normally "private" components of a development. These forms of project financing can range from loans or loan guarantees to equity participation through contribution of land, cash or "in kind" services. Generally, these measures entail that the transit entity assume an explicit share of the risks and returns in a specific real estate development.

Experience to Date

Although some local governments have been involved in land development, through urban renewal projects, participation in the sense used here has been limited to date. Characteristically, various administrative and legal restrictions prohibit cities from assisting in real estate projects through provision of debt or equity capital. Recently, however, these restrictions have been relaxed somewhat. For example, equity participation is contemplated for conversion of New York City's present Commodore Hotel to a modern convention facility. In several DPM applications to UMTA, equity participation or other forms of financial involvement are suggested. In other instances quasi-public entities, without direct involvement in transit, have engaged to participate in real estate development. A case in point of the latter is the Dayton (Ohio) City-Wide Development Corporation, described in Appendix C of this catalog, which recently levered its own capital resources to secure a new Stouffer's hotel and restaurant complex in downtown Dayton.^{1/}

Financing Potential

Experience with these techniques have been extremely limited, and it is difficult to evaluate what the potentials may be. In any case, the potentials depend on the specific deal struck between the public, or quasi-public entity and private developer. To be effective, it does demand that the local transit or development entity comprehend how profits are made in real estate, or more specifically, matters of cash flow, leverage and tax consequences. This would enable the entity to fit the loans, loan guarantees or other types of "participation" to meet the needs and goals of different developers, which may vary according to their degree of capitalization, their interest in tax consequences or cash flow in the project.

Institutional Feasibility

As mentioned before, legal restrictions on present public entities probably

^{1/} DCWDC's involvement in the project included: 1) land acquisition grants and urban renewal subsidies (acting as a legal intermediary for the city's renewal authority), 2) subordinated leases with purchase options, 3) capital contributions "seed" equity and general partnership funds, 4) securing property tax exemptions for the developer. Debt financing was provided by a combination of private sources.

would require new enabling legislation or at least the creation of new types of entities to engage in more directly in real estate development on the public's behalf. In addition, the agency must acquire a sufficient knowledge of real estate to be a keen negotiator, maximizing public benefits and minimizing public costs. This could involve giving the developer just enough assistance to pursue the project, but no more; or providing assistance in the most cost-effective manner. (See Appendix C for elaboration of this point.) It should be realized, of course, that public sector objectives would typically extend considerably beyond the profit-oriented goals of a private sector agent in real estate development to comprehend job creation, expansion of a community's tax base, central city revitalization and so forth.

Issues in Public Land Acquisition

With discussion above of the 4 basic techniques, some of the larger issues and problems can be approached. Two major problems differentiate this category from previous ones -- the use of eminent domain, and public involvement in what is essentially the real estate development business. This section, and a subsequent one on public development will discuss some issues raised and provide suggestions for solving certain problems.

As noted above, eminent domain refers to the right of government to acquire private property for public use or benefit upon payment of just compensation. While the line between the police power (e.g. for land use regulation) and eminent domain is a fine one, the essential difference is that in the latter the property is actually taken for use or benefit. Although statutory authority — and court interpretations -- have somewhat liberalized the application of eminent domain in recent years, this power is still much more limited in scope than the police power.

Of all the acquisition methods available to transit or development entities, condemnation through exercise of eminent domain is clearly the most powerful, but it is generally restricted to those public purposes specified in the agency's enabling legislation, as broadly or narrowly interpreted through judicial review. For general purposes of state or local government, the scope of application may be broad; for special purpose agencies such as transit or development entities, interpretation

tends to be restrictive. Accordingly, those entities embarking on an ambitious program of supplemental acquisition may want to consider using the broader eminent domain powers belonging to general purpose local government.

A recent investigation of land acquisition for highway joint development notes that three types of institutional arrangements can be employed in publicly acquiring property. While noting the deficiencies in conventional terminology (e.g. the narrow definitions of "excess acquisition"), the study team also sought to establish a new set of terms with which to analyze acquisition by public agencies. These suggestions are set forth in the Feature Box following. Although the examples are highway-related, ready parallels are apparent to the transit field.

A transit financing program relying on public land acquisition must be formulated in accord with: 1) legal restrictions with respect to publicly acquiring land and related development rights; 2) legal restrictions with respect to disposing of property and related development rights or otherwise participating in property development; 3) available financial and administrative resources to undertake such a program; and 4) the apparent transit financing potentials of this approach.

LAND ACQUISITION BY PUBLIC AGENCIES:
A CONCEPTUAL FRAMEWORK AND TERMINOLOGY

Three types of institutional mechanisms can be employed to acquire land for joint development associated with a major facility such as a highway, outside the area actually used for siting or maintenance of that facility.

a. Consolidated acquisition. This occurs when general purpose government itself makes the acquisition. It may also occur when special purpose agencies, with broad legislatively-stipulated powers, such as urban renewal authorities, are enabled to make takings for a variety of uses and purposes.

b. Cooperative acquisition. This occurs when two or more public agencies, usually within some approved planning framework, make acquisitions for inter-related facilities; e.g. school sites and parks. Each agency has its own land budget and acquisition personnel, but cooperative taking agreements have been established, along with timing of acquisition.

c. Excess or expanded acquisition. This occurs when the same agency which acquires the site for the major facility takes additional land which may be used for complementary activities. It encompasses four types of takings, normally employing eminent domain. Three of these are commonly termed "excess" acquisition. The fourth type involves land which may not be required for activities legislatively determined to be within the public purposes of taking agency. Land assembled through each of the four approaches can in principle be utilized (through disposition to another public or private body or through development by the acquiring agency) for public or private facilities compatible with the primary facility — such as highway or rail transit line.

— Remnant and remainder land. The additional land might be a remnant parcel acquired to avoid excessive severance damages (e.g. when the cost of acquiring only the portion of the property needed for the facility would be comparable with the cost of acquiring the entire property by virtue of anticipated damage payments to the owner for elimination of access, or other constraints on reasonable use). It might also be remainder land, originally acquired for direct needs of the facility itself but eventually not necessary — either because the property was required only in construction (e.g. borrow pits for fill and gravel) or because the final location of the facility was altered.

Although re-use is not the objective of remnant and remainder takings, some facilities and activities may be suitable for the surplus land and at the same time be compatible with the highway or other facility.

— Land acquired for protection purposes. One such type represents land purchased for the protection of the facility. In a highway

situation this could represent property whose physical characteristics pose threats of flooding, subsidence, rock slides or other dangers to the highway and is purchased to prevent development that accentuate these difficulties. For a scientific testing laboratory, this might be land on which activity would disrupt measuring instruments.

A second form of protection taking is of more recent importance due to NEPA and other environmental legislation. This is land to protect a neighborhood or community from the impacts of a facility, e.g. the use of land area buffers to mitigate adverse impacts. Typical examples would be large safety zones around atomic power plants or sewage treatment facilities where acquisition by the agency involved becomes the most direct means of preventing intrusive emission into settled areas. Present FHWA policy allows financial support to highway agency acquisition of abutting lands to protect neighborhoods from highway noise impacts, if state constitutions permit.

Although re-use is not the objective of acquisition, some facilities and activities may be suitable for the surplus land and at the same time be in keeping with the protective purpose.

- Land acquired for recoupment of facility costs. This situation occurs when the legislative mandate of the taking agency allows purchase of additional land for eventual resale or lease. The funds from the resale or lease are earmarked for return to the taking agency, and the agency is thus able to recover part of the cost of the facility. Examples would be serve stations and restaurants along toll roads and private warehousing sites in areas developed by a port authority.
- Land acquired expressly for joint development of facilities complementary to or combined with the primary facility. This situation occurs when the legislative authority of the taking agency expressly includes other public uses beyond its primary mission. Acquisition are not "excess," since the purpose includes development of complementary projects. Examples would be rest areas and bike paths associated with a highway. They could also include such projects as schools and commercial development in an impact area where project construction and ownership would eventually rest with private groups or public bodies other than the taking agency; again, if the legislatively determined purpose allows. This approach may be termed "expanded acquisition expressly for joint development."

Title 23 of the U.S. Code as amended allows Federal financial support to certain expanded acquisition activities of state highway agencies associated with federally-financed highways. These include: scenic areas, rest areas, and service

plazas; bicycle and hiking paths; certain public transportation facilities and parking areas; fringe and corridor parking; land for "functional replacement" of state and local public facilities displaced by highway construction. Under the Uniform Relocation Act, sites for last resort replacement housing can be acquired along with highway acquisition. The National Mass Transportation Act of 1974 makes transit corridor development corporations eligible for Federal financial assistance. Although none have yet been established, activities of such corporations could, if authorized by state legislation, include land acquisition for joint development within the transit corridor.

Source: Rivkin Associates, Inc., "Acquisition of Land for Joint Highway and Community Development: Executive Summary" (Report prepared for Federal Highway Administration: 1976), p. 3-5.

Legal Restrictions 1/

Property or related development rights must be acquired in order for any of the techniques considered in this chapter to be employed. However, the power of a transit or development entity to acquire land or related rights (or easements) is a question of state statutory law, and must accordingly find approval in the state legislature.

Specifically, if an entity condemns property (i.e. acquires land by exercise of eminent domain) with the intention of reselling or leasing same to a private party, then the "taking" issue is raised. Determining the legality of this action, or whether the "taking" of property was for actual public use or benefit, is a legislative function in the U.S., subject to judicial review.^{2/} Consequently, public purpose in the exercise of eminent domain is a state constitutional requirement and may be successfully overturned by court challenge. Even if acquisition of property and related development rights is by purchase rather than condemnation, the authority for expenditure of funds for "public purpose" is also a state constitutional requirement. The accompanying feature box provides further background on the legal restrictions respecting government acquisition of private property (upon payment of just compensation) for purposes of public use or benefit.

1/ This discussion of legal considerations draws heavily on Rice Center for Community Design & Research, Value Capture and Joint Development Applications: Los Angeles, Louisville, Chicago (Report of the University Research Program, Department of Transportation: 1976) and Daniel, Mann, Johnson & Mendelhall, Valuation of Air Space (National Cooperative Highway Research Program Report No. 142: 1973).

2/ A distinction between public purposes here and in England is that what Parliament declares a public use or purpose is not reviewable by the judiciary, whereas in the U.S. the courts are the final arbiters and may overrule the legislative determination.

ON DETERMINING THE VALID EXERCISE OF EMINENT DOMAIN

Public Purpose; Public Use. Objects for which public powers or funds may be employed for the benefit of the public; public purpose and public use are now used interchangeably to express this criterion of public benefit. What is a public use or purpose may be determined by either the executive, the legislature, or the courts, depending on laws and procedures. In general, it involves public benefit, utility, or advantage. Public money may not be spent or public powers applied for private advantage. A use is public if it affects the public generally or any part of the public, as distinguished from benefiting an individual or a few special individuals. The determination is important, for eminent domain can be exercised only where the use or purpose is public or benefits the public. This does not mean that the agency employing the eminent domain power cannot be private — it is the use or purpose that is determinative, and the legislature may confer the power on private parties such as railroads or utility companies if the purpose is public.

The rule on public use has been stated by Nichols:

"It is a public use for which property may be taken by eminent domain, (1) to enable the United States or a state or one of its subdivisions to carry on its governmental functions, and to preserve the safety, health and comfort of the public, whether or not the individual members of the public may make use of the property so taken, provided the taking is made by a public body; (2) to serve the public with some necessity or convenience of life which is required by the public as such and which cannot be readily furnished without the aid of some governmental power whether or not the taking is made by a public body; provided the public may enjoy such service as a right; (3) in certain special and peculiar cases, sanctioned by ancient custom or justified by the requirements of unusual local conditions, to enable individuals to cultivate their land or carry business in a manner in which it would not do otherwise, if their success will indirectly enhance the public welfare, even if the taking is made by a private individual and the public has no right to service from him or enjoyment of the property taken."

The one ethic with a claim to universality has been that the property of one individual may not be taken solely for the purpose of turning over to another. This ethic comes close to being violated in urban-renewal policy. The principle is preserved, however, by the presence of slum clearance as the public purpose ("slums menace health").

Source: Charles Abrams, The Language of Cities (New York: Avon Books, 1971), p. 251-252.

Otherwise stated, before embarking on land acquisition, a transit or development entity needs to resolve the following questions:

- does the state legislature specifically allow for land acquisition with the intent of reselling or leasing to private parties 1/;
- given such a statutory declaration, do courts in the relevant jurisdiction permit land acquisition for subsequent private development into significant commercial uses;
- if so, do the courts require a separate legislative determination that eminent domain is exercised for a valid purpose, or do they presume (absent fraud or gross abuse of power) that a legislative determination is sufficient?

Answers to such questions tend to require considerable legal research, with conclusions which are highly "area specific" in character. In some cases, state statutory authority -- and court interpretations -- appear adequate. For instance, Rice Center investigated such legal concepts in their study of Los Angeles, Chicago and Louisville, in the course of which the study team questioned "key legal professionals" and reviewed "pertinent statutes." They concluded that:

Given statutory declaration of the public purpose on which the power to exercise eminent domain is based, the courts in Chicago, Los Angeles, and Louisville have permitted a broad range of development projects including those with extensive private participation in the development of land condemned by public agencies. With this rather broad definition, the transit or development entity's use of supplemental condemnation may find affirmation from the courts for a range of Value Capture projects undertaken.

Based on the courts' construction of public purpose in each of the jurisdictions as well as general comments that many so called "supplemental condemnation" cases were viewed as a valid use of the power of eminent domain for public purpose by the transit or community development authority, so long as a development plan

1/ Technically, a similar question might be raised with respect to public entities, except that extensive private participation in land development for significant commercial uses is typically required to create financing potentials.

was in evidence, it can be said that some measure of supplemental condemnation is legal in the cities of Chicago, Louisville, and Los Angeles. However, the use to which this land is put may be problematic. Public bodies were generally expected by those interviewed to put lands taken to producing temporary revenues, while schemes for long range income production may have more problems in meeting the tests of public purpose related to taking the land in the first place. 1/

In other areas of the country, uncertainty about legislative and judicial attitudes on this subject amount to significant deterrent to this approach. As a general matter, the more large-scale and long term a private development program, the less legally defensible is a public land acquisition for this purpose by a transit or development entity (unless explicitly sanctioned in state legislatures and the local courthouse).

Paradoxically, the type of property subject to the fewest legal restrictions as regards acquisition is probably air rights; this is also the least likely to be developed by private parties, in some cases. Acquisition of air rights ^{2/} requires no supplemental (or excess) condemnation, but only the power of a transit or development entity to deal in transit-related real property for purposes of income production. However, lack of private sector interest in development such space can stem from a number of factors, including:

- The high cost of construction over a transit artery relative to land values and construction costs on nearby alternate sites;
- Location of transit routes through areas of relatively low land value and/or development potentials (often with the objective of minimizing right-of-way acquisition costs);
- Lack of state legislation, legal precedent from local courts and agency policies and procedures to encourage and expedite air rights development;

1/ Rice Center for Community Design + Research, Value Capture and Joint Development Applications: Los Angeles, Louisville, Chicago, (report of the University Research Program, Department of Transportation: 1976), p.3.

2/ Recall from Chapter 3 that air rights encompass space located above and/or below a transportation artery's established grade line, and within the approved right-of-way boundaries.

- Unfamiliarity with air rights development on the part of the real estate industry and financial community; and
- Reluctance of the transit or development entity to become involved in large-scale, extended period projects.

Finally, even if real estate and financial practitioners are sophisticated in air rights, the transit or development entity is receptive and legal requirements are satisfied, very few cities are so densely developed that land becomes sufficiently scarce and costly to justify air rights construction.

If the transit or development entity can acquire property and related development rights, several questions must then be answered. These involve possible legal restrictions on disposing of property and related development rights which must be resolved in designing a financing program which relies on public land acquisition techniques. These questions include:

- Can air rights "property" be leased or sold under the state's common law;
- Does the transit or development entity have the power to lease or sell property in general, or air rights in particular;
- Does the entity have power to lease or sell for purposes of joint development; and
- May the entity itself serve as the joint developer, or otherwise participate (notably in the financial sense of receiving income) in development?

Recourse to common law and statutes in the subject state -- specifically those governing the entity -- is required to answer these questions. Legal issues associated with disposition of property (or development rights) for less than fair market value may also present constraints for the entity in its attempt to encourage joint development.

Financial Constraints

Regarding financial resources, the likely timing of costs and returns should be a fundamental consideration in formulating a financing program. In general, public land acquisition techniques require front end investment, which tends to compete with monies needed to construct transit. Except where property is already in

public hands (e.g. land already owned by a local renewal authority) or "acquisition" concerns only air rights (acquired anyway in the course of right-of-way assembly), the financial resources required to initiate these techniques can be substantial -- especially if compared to land use regulation or taxation and assessment techniques. The transit entity must determine whether or not the benefits outweigh the costs of requiring land beyond the right-of-way.

Administrative Constraints

This constraint can be even more binding than the former in some communities, since a public land acquisition approach generally requires more management skills than either of the two preceding approaches. The term "administrative resources" as used here covers a composite of factors which collectively have a significant bearing on the program's ultimate success (and thus the joint development projects which make up the program). These factors range from the effectiveness of the entity's leadership, to the continuity of top management and staff, to the experience of staff professionals in relevant aspects of property acquisition and disposition and real estate development. In this sense -- and quite apart from preparing sound plans -- an effective administration can set the tone for a joint development program, promote the program among business circles and in the community-at-large, offer technical expertise to cooperating public and private parties and even secure the support of local elected officials. ^{1/}

The importance of such administrative resources, especially the capability of the agency's director(s) over time, is difficult to over-estimate in land acquisition

- 1/ Lack of support can range from apathy to actual interference by elected officials such as the mayor or councilmen. Examples of support could take the form of 1) policy initiatives by elected officials serving on the entity's board; 2) better interagency coordination of complex redevelopment processes; and 3) moral persuasion in local political forums.

With respect to land disposition for joint development, for example, it may be advantageous to involve local key actors (the mayor, city council members or other local officials) in discussions and negotiations with potential developers. Assurances of city support with respect to such factors as temporary street closings needed to facilitate construction, prompt issuance of needed permits, assistance in meeting any special local regulations, and timely completion of necessary project improvements or public facilities can all be important in convincing a potential developer to participate in a city's program.

and disposition activities, and is considered by many experienced observers to be the single most important factor in explaining the success of some urban renewal program across the country (e.g. Baltimore, Philadelphia, Boston, San Francisco) relative to the poor record of many. In this connection, it should be recognized that many renewal agencies have been plagued by lack of leadership, rapid staff turnover and related problems, especially during the past decade. In many cities, these problems appear to have deepened since 1974 (when renewal and a number of other HUD categorial grant-in-aid programs were replaced by Community Development Block Grants), with many renewal authorities being absorbed into city government line agencies or disbanded altogether.

One result has been to disperse the very administrative resources and professional expertise that could be invaluable to designing and conducting a joint development program with innovative financing techniques, where transit entities do not have these capabilities.^{1/} Another is that new ground rules governing the CDBG program tend to bias HUD funds away from concentrated redevelopment in

1/ The situation in Chicago, and specifically the Chicago Transit Authority is instructive. As reported by Rice Center,

"Because the current rapid transit operating agency, the CTA or Chicago Transit Authority, was created in part from existing private rail systems, a number of private uses on formerly private property became private uses on public property as the CTA took over leaseholds of the private systems they absorbed. Most of those uses that have had any economic viability have remained on CTA property, apparently without complaint, their rents in sometimes key locations adding to the revenues of the system. The use of public property -- especially transit system property -- by private concerns is thus an established fact in Chicago, whether or not it would have been legally permissible ab initio.

"However, certain issues can be mentioned in general concerning the \$14,075,590 land assets in balance in 1973 of the CTA. According to one expert, management and administrative staff does not exist to actively pursue real estate development. The charge of the CTA is people delivery, and commercial facilities and installations are considered in relation to the convenience and necessity of the transit patrons. Thus, the CTA interest is in increased accessibility and ridership potential. While the CTA does not actively pursue development, it welcomes the opportunity to deal with the private sector."

Rice Center for Community Design + Research, Value Capture and Joint Development Applications: Los Angeles, Louisville, Chicago (Report of the University Research Program, Department of Transportation: 1976), pp. 16 and 168.

key areas of a city, and toward rehabilitation andn conversation activities on a community-wide basis. This shift of public investment away from redevelopment is probably the most significant departure from previous practice. ^{1/}

1/ While many exogenous factors (e.g. a depressed real estate industry during 1974 and 1975) help explain this de-emphasis on redevelopment, it is also the result of a largely unforeseen bias in the new CDBG program. Specifically:

- the new program provides annual funding (albeit over a three year period), instead of large-scale set asides so that local governments can make long-range contracts with private developers, as undr urban renewal;
- the new program makes the entire community eligible for CDBG assistance, instead of earmarking federal monies for areas within urban renewal project boundaries or "model neighborhoods"; and
- the new program also broadens the array of "eligible activites," to increase certain types of public services.

When coupled with the fact that local elected officials (instead of renewal authorities, which were often semi-autonomous from general-purpose local governments) now control CDBG funding, these three biases created strong political pressures (along with administrative leeway) against concentrated redevelopment.

Issues in Public Property Development

Beyond public land acquisition, some of the techniques considered in this chapter call for deeper public sector involvement in real estate, either directly (e.g. as master developer or general contractor) or indirectly (e.g. participation in project financing). Such techniques, in turn, rely on the legal authority of a transit or development entity to deal in real property, and in some cases to undertake or participate in property development for income producing purposes.

Legal Restrictions

An initial issue surrounding this activity is legal, since municipal corporations and transit authorities under many state institutions are prohibited from conducting physical development directly, except within their prescribed perogatives (e.g. a city may acquire and improve property for schools, public housing, transit, courts, prisons, etc.). Characteristically, these types of state restrictions not only prohibit cities, or transit entities, from assisting private firms, but also from engaging in land banking, or related real estate development and financing involvement, except in urban renewal areas. It should be noted, nonetheless, that several states have enacted or are considering enabling statutes allowing private organizations as well as quasi-public entities (e.g. private, non-profit economic development corporations) designated by local governments to engage in many activities prohibited to municipal corporations. Some examples of these entities are contained in Appendix C of this catalog.

In terms of competing for monies needed to complete transit construction, public property development poses issues similar to those for advanced land acquisition. These are intensified, though, because government funds would be required for both land acquisition and property development. Land acquisition costs are typically no more than one-third of total development costs. Even assuming that substantial public funds are available for this purpose, a related issue surrounding public property development concerns the appropriateness of the activity. Otherwise stated, what investment criteria should the public use for its decision, and what implications has this for the objectives of both the transit or development entity and the local government as a whole? Some of the criteria used could be: that the public sector should invest only where sufficient private

capital is not available at non-usurious rates and reasonable terms; that it should invest where there appear to be important advantages to government involvement that cannot be obtained through some sort of non-financial involvement with the public sector; or that it should invest only where there are reasonable benefits that exceed the public's costs. These are not necessarily mutually exclusive; rather, they illustrate some of the priorities that can be viewed in the situation.

Administrative Constraints

Again, this consideration parallels that for public land acquisition, but is even more critical to implementing property development, as few public agencies possess either the entrepreneurial ability or real estate expertise to engage in property development. Of the many techniques worth exploring in more detail, loans and loan guarantees respond well to the problems of public participation in property development, and limit the degree of government involvement in development activities. They are frequently employed, although there is little literature on the subject, and have attached to them numerous forms and a broad range of objectives. These should be distinguished from grants, because with loans and loan guarantees money is paid back with the money being regarded as an investment, having an attendant rate of return. This concluding section provides two examples in brief 1) entirely local loans, and 2) federal loan guarantees, that enable transit entities to participate in property development.

Loan and loan guarantees are designed to have various functions.^{1/} Some are essentially supporting devices that provide interim financing, such as those under the Urban Renewal Program. Others provide a government subsidy in the form of low interest rates or reduction of principal, as do the Federal guarantees of WMATA bonds, the only known transit application. Certain programs attempt to aid activities which cannot be financed by private capital markets (the so-called "non-bankable loans"); others are designed to broaden or develop those private capital markets (the HUD New Communities program), or to circumvent obstacles to ordinary capital market financing (e.g. in response to desperate situations,

1/ In actual practice, it is difficult to distinguish how direct loans and guaranteed loans differ from each other in substance regardless of how they are designated, say, in U.S. government programs that offer one or the other. For example, a popular concept of guaranteed loans is that the government assumes part or all of the credit risk and that the private sector performs the functions of financing the loan and the paper work involved in loan application, appraisals, servicing and default procedures. Two cases serve to highlight the thin and often invisible lines between guaranteed and direct loan programs. First, certain agencies are empowered to make direct loans (incurring the cost of origination and servicing) but can remove the loans from the budget totals by reselling them with a guarantee to a private party. Second, under the HUD urban renewal program, which provides for direct loan authority, a commitment to make a direct loan is treated as a guarantee, and the actual obligations are sold in the market by non-federal entities.

The loan vs. loan guarantee classification is of particular importance in the budgetary process. Loan guarantees have long been popular in part because guaranteed loans are largely excluded from the federal budget. Past studies have wrestled with the problem of how federal loan outlays should be reflected appropriately in the budget, but little progress has been made in solving this issue in the past decade, nor in developing new Congressional procedures for reviewing guaranteed loan authorizations. Specifically, in the Congressional Budget Control Act of 1974, guaranteed loans were specifically exempted from the new congressional budget process. However, while loan guarantees are different from outright grants, they do in fact involve a very substantial cost to the taxpayer and to the economy, varying considerably from one guarantee to another, depending on the structure of the more than 100 guarantee programs which have been enacted by Congress and the different types of subsidies provided by the Congress in these programs.

financial collapse in the 1930's, regional or national calamities, economic stagnation). Last of all, there are some in which the government or its agents act as a lender of last resort for financial institutions or other business interests on the basis of its sovereign and exclusive control of the money supply (e.g. loans to Lockheed).

Loan or loan guarantees often lack financing, (whether direct or indirect) as their stated objective. As a practical matter, they have the potential to both finance projects and to attract additional development to land around transit facilities. In this sense, they can provide an opportunity for applying innovative financing techniques per se, and encourage specific joint development projects. Innovative financing techniques do provide certain incentives to developers, but can act as a short-term drain, at least initially, on local finances before their ultimate potential is realized. Loan and loan guarantees, at least, can be less of a problem, in this connection. The following discussion amplifies these points.

Loans. Loans are one of a number of investment incentives that can be employed by local transit or development entities who are seeking to attract private investment. Discretionary funds for making direct loans to private entrepreneurs are a most flexible tool, in that they can be tailored to fit the exact requirements of the situation. For example, some developers have sufficient capital; some are capital short, and their respective problems and objectives require varying approaches. Public loan funds could be used to leverage private investment, though such discretionary funds are not available to most transit or development entities.

Further, if a local entity had sufficient resources to furnish the loan funds itself, doing so for one massive project could curtail its participation in other projects; accordingly, it could strive instead to limit its funds to but a portion of a project's financing. Even so, a small direct loan can have a significant impact on the project, for it would normally be a second or junior mortgage to the first mortgage of other lenders. Should the project fail, the local entity would be repaid only after those first mortgage lenders were satisfied, if at all. However, in general, there would be little or no long-term cost to the transit entity. Thus, a small carefully placed junior loan offers the prospect that a judicious entity need

not incur significant losses in launching projects. Indeed, by using such cost-effective devices, development efforts could be placed on a self-supporting basis, or even be revenue producing.

Loan Guarantees. Loan guarantees, often described as "back door financing," have numerous variations of form and function. Congress, in the Federal Financing Bank Act of 1973, defined the loan "guarantee" as any guarantee, insurance or other pledge with respect to payment of all or part of the lower interest on any obligation. In keeping with this definition, the Federal Financing Bank has purchased a wide variety of obligations guaranteed or insured by federal agencies, including obligations secured by federal agency lease payments and obligations acquired directly from federal agencies and then sold to the Federal Financing Bank, subject to an agreement that the selling agencies will assure repayment to the Federal Financing Bank in the event of default by a non-federal borrower. This definition of guaranteed obligation is also interpreted by the U.S. Treasury as including obligations supported by federal agency commitments to make debt service grants (e.g. to support public housing authority bonds), or other commitments such as price support agreements, or commitments by federal agencies to make "take out" loans in the event of default on a private obligation.

The loan guarantee type of credit assistance has been considered more useful and appropriate than other types of federal aid, particularly with respect to possible applications for joint development, because, it has been argued, direct federal involvement though appropriate grant monies is not needed for financing proposed higher return projects. It could also be argued, for the case of promising joint development projects, that lack of capital on a timely basis, rather than lack of long term profitability, is the problem. Under this line of thinking, a loan guarantee program in fact would constrain the local transit or development entity to participate in what will presumably be profitable development. Such developments would be those which, due to benefits received by transportation services and facilities, would sooner or later be undertaken by the private sector without public assistance. The purpose of the guarantee would be to facilitate local borrowing for "high leverage" non-transportation finance purposes at a time when transportation construction and equipment places maximum strain on local borrowing power, thereby increasing the pace of development around transit facilities and opening up a new stream of capital.

Key Public Land Acquisition Literature

Literature in connection with this chapter deals with acquisition and property development by the public sector. The first is well-treated as an adjunct of works on transit system development. There is relatively little literature on the second subject of public development, however, documenting either the institutional constraints or the types of projects undertaken. In an attempt to somewhat compensate for this deficiency, some of the salient references with respect to individual incentives and institutionalized forms for undertaking such developments are treated in Appendix C of this catalog.

KEY PUBLIC LAND ACQUISITION LITERATURE

Callies, David L. and Christopher J. Duerksen. "Value Recapture as a Source of Funds to Finance Public Projects," in Urban Law Annual 8: 73-79, 1973. Presents a thorough examination of supplemental (excess) condemnation from a legal viewpoint. Contains extensive references to case law establishing precedent for several means of excess condemnation.

Carr, Jack and Lawrence Smith. "Public Land Banking and the Price of Land," in Land Economics (4): 316-330, 1975. A brief essay exploring the economic rationale of government advance public land acquisition. The influence of land banks and the effect of land speculators in land prices are discussed. Concludes that the introduction of a public land bank is unlikely to reduce the price of developed land.

Daniel, Mann, Johnson and Menhenhall. Valuation of Air Space. National Cooperative Highway Research Program Report 142). This introductory monograph discusses the use and valuation of air space. Concludes that widespread use of joint development in highway planning and acquisition of right-of-way is probably not feasible in most urban areas. Criteria in planning and case studies (the George Washington Apartments in New York City and the Prudential Center in Boston, for example) are given.

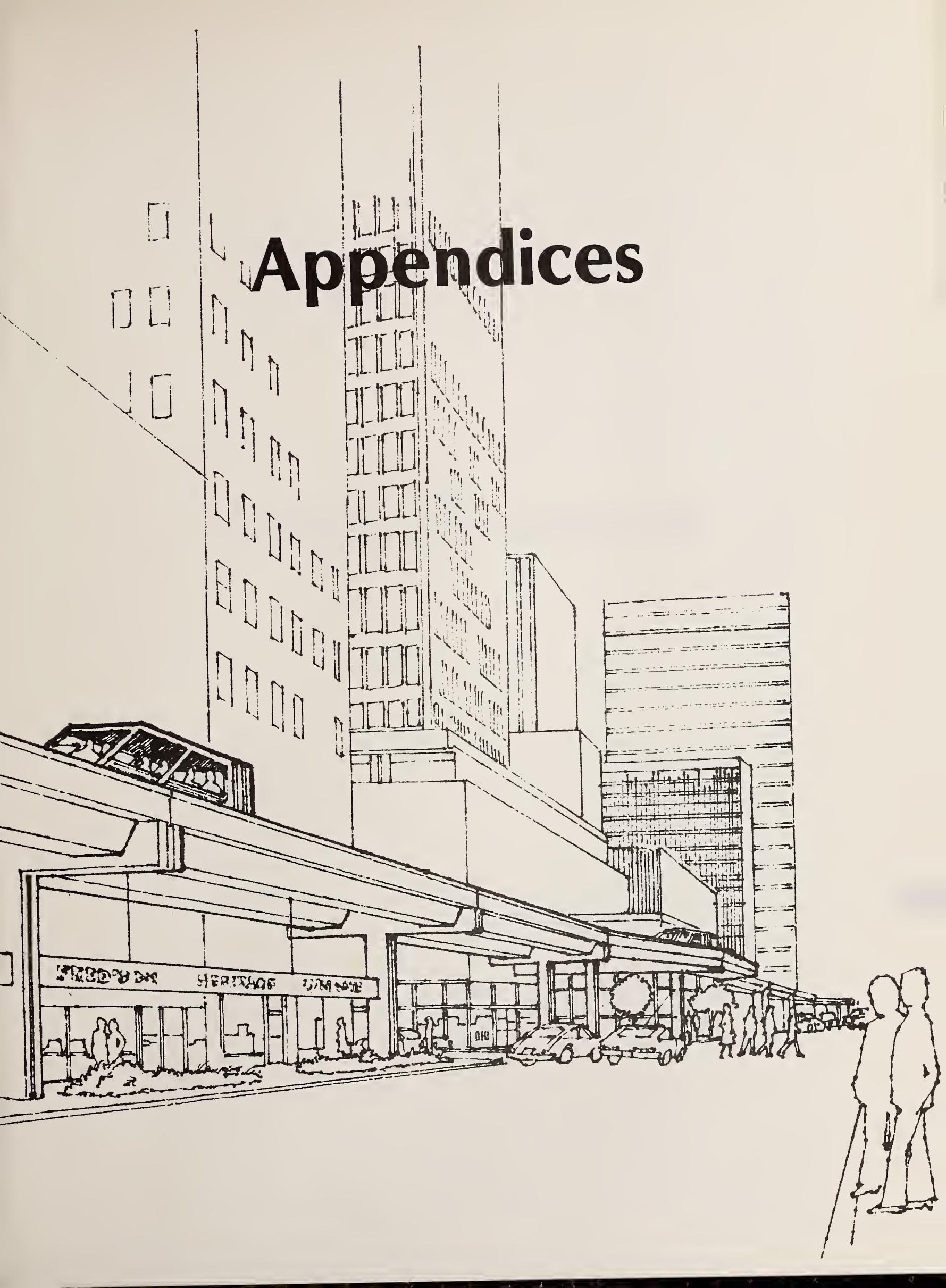
Institute of Public Administration. Advance Land Acquisition by Local Governments (prepared for the U.S. Department of Housing and Urban Development). Washington, D.C., 1968. The first systematic analysis of the costs and benefits of advance land acquisition in public facilities. Develops guidelines for localities to help weigh both costs and benefits in decisions to invest in land to meet future needs.

Rice Center for Community Design + Research. Value Capture and Joint Development Applications: Los Angeles, Louisville, Chicago (prepared for the U.S. Department of Transportation). January 1976. A comprehensive review of value capture techniques, applied in hypothetical transit development situations in each of the above cities. Value capture potentials at several station locations in each city are evaluated, including broad legal and administrative constraints, as well as specific opportunities to realize cash flow.

Rivkin Associates, Inc. Acquisition of Land for Joint Highway and Community Development: Task A: Conceptual Framework and Inventory; and Findings, Conclusions Recommendations and Synthesis of Project Reports (draft; prepared for the U.S. Department of Transportation). November 1975 and July 1976. Detailed exploration of land acquisition by transportation agencies and public agencies. Introduces a number of new terms: "consolidated," "cooperative," "excess" and "expanded" acquisition. Discusses the achievement of joint development objectives through land acquisition, and also details legal, political and financial aspects. Points are illustrated through case studies in six states and Toronto.



Appendices



ANNEX A
GLOSSARY OF FINANCE AND DEVELOPMENT TERMS



GLOSSARY OF FINANCE AND DEVELOPMENT TERMS

Absorption Period

In real estate development, the rate at which land or buildings will be sold/leased in the marketplace during a pre-determined period of time, usually a month or year.

Access

Refers to the right or need for entrance or approach to a parcel of real estate.

Accessibility

Feature of a property permitting it to be easily approached by pedestrians, autos, or public transportation. Usually, the more accessible a property, the higher its value — unless accessibility impairs the property's security.

Acre

Unit of land measure; 43,560 square feet. As a square, an acre measures 208.71 feet on each side.

Active Investor

One who invests both equity capital and packages, builds and/or manages a project.

Ad Valorem Tax

Tax based on the real value of property rather than its income, cost, marketability, etc. The value is usually established by a public assessor. (Ad valorem means "according to value.")

Air Rights

A legal concept which refers to ownership rights above or below a certain piece of property. They are limited by terms of the ownership contract, by federal, state and local height restrictions and by safety rules or ordinances.

Air Space

A physical concept referring to the portion of the earth's atmosphere above or below a certain section of property.

Alignment

Alignment refers to the geometric configuration of the track. Each track has a horizontal alignment and vertical alignment.

Amenity

Feature of a property that renders it more attractive, such as its accessibility, good design, and proximity to shopping or other public facilities, recreational or cultural centers, schools, and parks.

Amortization (of debt)

The process of retiring debt by a series of payments to a creditor or into a sinking fund, usually over an extended period, at the end of which the debt is considered extinguished.

Appraisal

An estimate of value placed on a property, usually prepared by a qualified expert. Appraisals are prepared on the basis of one or a combination of any of the following: the market approach (recent sales of comparable property), the income approach (estimated project income over its expected life), or the cost approach (estimated replacement cost of the improvements, less accrued depreciation to date, plus a separate value for the land). Also refers to the process and the report itself.

Arcade

A roofed passageway, along both sides of which are usually located small stores, shops, or similar facilities.

Auto Restricted Zones (ARZ's)

Auto-restricted zones (ARZ's) — also referred to as traffic-free zones — are generic terms that encompass a large family of projects, including the so-called transitways. ARZ's are typically designed to discourage automobile use in designated downtown areas, rather than totally banning private motor vehicles. Their objective can be environmental and aesthetic improvement, promoting economic growth, rationalizing traffic and pedestrian circulation, or improving transit service. Auto restricted zones in the U.S. are habitually linear, focused on one or two streets, whose sidewalks have been widened, amenities added, with a bus or rail line within the street right-of-way. The various types of ARZ's are briefly described in the following:

- Pedestrian Districts: Elimination of vehicular traffic over a section of the city that for architectural, historical, or commercial reasons need be considered a unit.

- Pedestrian Streets or Pedestrian Mall: Isolated, individual streets from which vehicular traffic has been banned. Emergency vehicles have access and delivery trucks are allowed at certain hours.
- Transitways or Transit Mall: Pedestrian precincts that retain a roadway reserved for transit vehicles integrated with a city-wide or regional transit system.
- Semi-Malls: Although they are similar to transitways in design, private traffic is not prohibited. Access may be limited, and severe speed limits are imposed on through traffic. They are often an interim step toward a larger traffic ban, and are similar to mini-parks or small urban plazas.
- Enclosed Malls: City streets that are totally enclosed and climatized, with physical conditions resembling those of suburban shopping centers. They are of complex design and formidable costs.

The above provides a review of the various alternatives common both in the U.S. and Western Europe.

As-of-Right Development

Development densities permitted under existing zoning as distinct from that possible under special provision, (e.g. a density bonus), which usually require site plan review.

Assembly (land)

Process of combining adjacent, usually contiguous properties into single ownership, usually for purposes of subsequent development.

Assessed Value

The value of a property as established by a tax assessor, as distinguished from the market value. Relationship between assessed values and market values may vary from community to community.

Assessment (on a property)

A tax levied on property by a taxing authority, for example, to defray the cost of a specific improvement or service.

Assessment (of a property)

Value placed upon a property for purposes of computing the real estate tax.

At-grade

Same approximate level as the existing ground surface.

Automated Guideway Transit (AGT)

AGT systems consist of driverless vehicles which operate over exclusive guideways. The guideways can be located on elevated structures, at street level, or below ground. The three categories of AGT systems are: shuttle and loop transit (more commonly called people movers), group rapid transit, and personal rapid transit.

- A downtown people mover or shuttle and loop transit (SLT) system is the simplest type of AGT system. The vehicles in this system may be of various sizes and travel on a fixed path which may have provision for several stations, but few or no switches. Vehicles may travel as single units or coupled together as trains to accommodate heavier passenger flows. In a shuttle system vehicles move back and forth over a single guideway while in loop transit they move over a closed path. There are numerous shuttle and loop transit systems currently in operation.
- Group Rapid Transit (GRT) differs from shuttle and loop systems in network and operational complexity since it is designed more to serve groups or travellers with similar origins and destinations. For this reason, group rapid transit has switching capabilities which allow for branch routes, and off-line stations so that vehicles on the main line are not delayed by those waiting at stations.
- Personal Rapid Transit (PRT) systems are characterized by small vehicles, usually carrying less than six people travelling together by choice. The headway, or time interval between the arrival of successive vehicles, is very short (usually less than three seconds), and the guideways are smaller and less obtrusive than DPM or GRT.

BART

Bay Area Rapid Transit (San Francisco).

Base Period

Point(s) in time used in analyzing data.

Betterment

Increase in the value of a property resulting from public provision of facilities, roads, or similar improvements.

Blight

Designates characteristics of an area which has seriously deteriorated or has been arrested in its development by physical, economic or social factors.

Also used to categorize neighborhoods of that nature for the purpose of establishing eligibility for urban renewal. What constitutes a blighted area, a slum and so forth is liberally defined in some jurisdictions, less so in others and in many cases depends on how the public authority chooses to define the term.

Blighted Area

Usually a neighborhood or portion of a neighborhood characterized by the existence of a degree of blight. Verging on a slum.

Block Grant

A general purpose grant from the federal government to a state or local government.

Bond, General Obligation

Bond backed by the general full faith and credit of the city, from normal city sources of funds.

Bond, Revenue

Bond issued by a public agency that are payable from certain revenues connected with that agency and earmarked for that purpose.

Bond, Special Assessment

Bond issued by a governmental entity to finance special improvements, to be repaid from special assessment revenues.

Book Cost

The cost of a property as shown in the accounting records of the owner.

Building Development

The process of installing structures and related facilities on improved land, as distinct from land development.

Built-up Area

An area in which 50 percent or more of the land is improved with buildings (not including land in excess of the needs of the buildings, their appurtenant uses, old foundations, temporary structures or temporary uses) and/or rights-of-way of improved or necessary streets and alleys.

Bus Lane

Street or highway lane intended for use primarily by buses but also used by other traffic for such purposes as making right turns. When traffic is

restricted from using a bus lane, it is an exclusive bus lane or busway.

Busway

A fast-link transit mode using high-performance buses on exclusive lanes in separate rights-of-way.

Capacity

The number of people capable of being moved by a transit line in one direction during the peak travel hours.

Capital Cost

The estimated cost of building and/or acquiring certain assets.

Capital Gain

Profit or gain realized on the sale or disposition of capital assets held for more than a specified period (e.g. 6 months).

Capital Improvements, or Capital Facilities

Projects of large size, fixed nature and/or long life (e.g. 15-20 years) involving expenditures of a non-recurring nature.

Capital Improvement Program

A governmental entity's budgeted expenditures of funds for capital improvements over a given period of time, usually based on planned needs and financial resources.

Capitalize (in accounting sense)

To record an expenditure as an asset to be carried forward into one or more future periods in which the benefits of proceeds will then be enjoyed.

Capitalization (in economic sense)

An analytic procedure for determining the value of an income producing asset, where the net income is divided by a predetermined income rate. For example, a building with a net annual income of \$100,000 is worth \$1.4 million at a 7 percent capitalization rate, $(\$100,000 \div 7\% = \$1,428,571.43)$. The capitalization rate, or "cap rate," in turn, usually corresponds to that interest rate which is considered a reasonable return on investment, based both on the investor's alternate investment possibilities and the risk of the investment.

Cash Flow

Annual (or in some cases monthly) proceeds from an investment after operating expenses, debt service and other allowances (e.g. for income taxes) have been deducted.

Categorical Grant Program (or Categorical Program)

Federal program with a single purpose resulting from its legislative enactment (such as urban renewal, basic water and sewer grant, and neighborhood facilities programs), as distinguished from a block grant system of funding.

Central Business District

The core of the city in which are located retail, office and other commercial functions.

Central Relocation Agency

A municipal agency or independent local authority or agency that provides relocation services on behalf of public agencies to displaced families, individuals, and businesses.

Clearance Program

The acquisition, demolition, and removal of structures from a defined area, and the preparation of the land for re-development — usually under the provisions of an approved urban renewal program. Clearance under the urban renewal program is distinguished from rehabilitation of properties.

Channelization

Direction of traffic into appropriate lanes so as to assure smooth flow of merging and diverging streams.

Cluster Development

Development of a land tract in a clustered pattern — whether residential, commercial, industrial, institutional, etc.

Collateral

Assets pledged as security for a debt (e.g., the real estate pledged as security for a mortgage).

Collateral Loan

A variation of conventional financing, under which a borrower can purchase a property with a smaller down payment than would be possible otherwise, because the borrower's down payment is complemented by collateral obligated to the lender and available in the event of default.

Collateral Pledge Agreement

An instrument through which a seller or another contracts to deposit a sum of money in a savings account, which sum serves as collateral on behalf of a

purchaser who is unable to make a down payment on the property that is satisfactory to the mortgager.

Community Action Agency (CAA)

Agency that administers a Community Action Program. A CAA must be designated by the state, a political subdivision of the state, a combination of such political subdivisions, or Indian tribal organizations. A state or local government (or a combination of subdivisions) may designate itself or another agency, which may be either a separate public agency or a private nonprofit organization.

Community Action Program (CAP)

Program funded under provisions of the Economic Opportunity Act of 1964 and later amendments, administered by a Community Action Agency. The objectives of the CAA are to mobilize and channel the resources of private and public organizations and institutions into antipoverty action; to increase the capabilities as well as opportunities for participation of the poor in the planning, conduct, and evaluation of programs affecting their lives; to stimulate new and more effective approaches to the solution of poverty problems; to strengthen communications and mutual understanding; and to strengthen the planning and coordination of antipoverty programs in the community.

Community Development (CD)

The process of applying the physical, social, human, financial, or other particular resources of a community toward its improvement. Also, a HUD term for the collective group of previous categorical programs administered by the Assistant Secretary for Community Development, including urban renewal, Model Cities, water and sewer grants, neighborhood facilities, rehabilitation loans, and public facility loan programs.

Community Development Block Grant (CDBG) Program

A consolidated program of federal assistance which in 1974 replaced most of HUD's categorical grants-in-aid for the physical development of cities, including urban renewal. Subsequently extended under the Housing and Community Development Act of 1977.

Community Development Program

Program formulated by a unit of general local government in its application to HUD for a block grant under the provisions of CDBG assistance. Such a program states the activities to be undertaken to meet community development needs.

Condemnation

A legal process which in effect is the public's exercise of the power of eminent domain.

Construction Loan

A short-term loan which enables a developer to pay contractors' bills and other expenses incurred before and during the construction period (also known as an interim loan).

Conventional Mortgage

Any mortgage not insured or guaranteed by a governmental agency.

Corridor

Strip of land of unspecified width within which transportation facilities are or might be placed.

Covenant

A restriction placed on a deed stipulating certain requirements the deed holder must meet or preventing him from using the property for certain purposes.

Cost Sharing Arrangements

These arrangements are an increasingly common feature of many public/private projects, and represent a pragmatic approach to sharing costs which neither partner can afford or feels justified to bear alone. Such costs can range from fees charged by architectural planning or other consultants to outlays for infrastructure which is partly government, partly private in nature.

Cross-Sectional Analysis

Review of data so as to identify statistical variations during a similar period among otherwise comparable areas.

Debt Capital

Money loaned at an agreed interest rate for a fixed term of years; distinguished from equity capital.

Debt Service

The total loan payment, including amount of principal amortization and interest portions, necessary to repay a loan.

Dedications and Exactions

Mandatory conveyances of land, facilities or money to a public entity for future community use as a condition for development approval. Dedications concern land facilities; exactions concern cash payments.

Design Contest

Competition established, usually by a public agency, to obtain a variety of architectural or planning schemes for the design of an area or a building.

Density Bonus (or Zoning Bonus)

Additional increments of density granted as a quid pro quo for inclusion of the developer's project of one or more specified amenities (e.g. plazas, arcades, subway concourses) or uses (e.g. ground-floor retail, theaters, housing).

Development Entity

A public or quasi-public development organization, be it a city agency, a traditional urban renewal authority, a Missouri-353-type redevelopment corporation, an economic development corporation, or similar entities (e.g. the transit corridor development corporations now being considered in some cities). Key features of such development entities are that 1) they have access to public monies and/or powers (e.g. eminent domain), and 2) they typically act, at least to some degree, to accomplish public purposes (e.g. eliminate blight) and/or as a development arm of local government.

Development Loan

A short-term loan, advanced before a construction loan, used by developers to acquire land and install basic utilities such as roads, sewers, water supply systems, etc.

Development Process

The process through which development projects are conceived, initiated, analyzed, financed, designed, built and managed.

Development Program

A specification of proposed land and/or building development (e.g. units of housing, square footage of office space), along with timing, phasing, acreage allocations and program alternatives. Development programs are usually derived from an analysis of market potential, salient site characteristics, physical opportunities and constraints, as well as specific developer objectives.

Dial-a-Ride

Transportation system in which a shared vehicle, requested by telephone, provides door-to-door -- or nearly so -- service for a number of passengers

with different origins and different destinations.

Direct Transfer

Bus patrons have direct access to paid platforms (i.e. no paper transfer required).

Discounted Rate of Return

A measure of financial return in which total cash flow from a project, including projections of the tax savings and the net cash proceeds of sale, is discounted back to a base period. This measure weighs dollars received early in the life of a project more heavily than those received later. Also referred to as "present value rate of return."

DOC (The U.S. Department of Commerce)

A federal agency that was created to promote the domestic and foreign commerce of the nation. Among the principal units of this department are the Bureau of the Census, the Office of Business Economics, and the Economic Development Administration.

DOT (The U.S. Department of Transportation)

A federal agency established in the Transportation Act of 1966 for the purpose of developing national transportation policies and programs conducive to the provision of fast, safe efficient, convenient, and cost effective transportation.

Down Zoning

Action by an entity authorized to adjust zoning regulations, which results in the lowering of the zoning classification of a given tract or tracts to a lesser land use.

Easement

Rights of use acquired on property owned by a second party, which do not infringe on the ownership by said party.

Economic Base

The sum of all economic activities that produce income for a city population or other large entity.

EDA (Economic Development Administration of the U.S. Department of Commerce)

EDA was established in 1965 by the Secretary of Commerce to carry out most of the provision of the Public Works and Economic Development Act of 1965

as amended. The primary function of EDA is the long range economic development of areas with severe unemployment and low family income problems. It also aids in the development of public facilities and private enterprise to help create new, permanent jobs, both under the initial enabling legislation and subsequent enactments.

Efficiency Ratio

The ratio net rentable area to gross floor area, both on floor by floor and total building basis.

Eminent Domain

The legal right of a government or other entity to acquire private property for public use upon payment of just compensation to the owner.

Enabling Legislation

Legislation authorizing governmental or other entities to carry out an activity, as under the provisions of a federal program.

EPA (The U.S. Environmental Protection Agency)

An independent agency of the federal government. It was created in 1970 to permit coordinated and effective government action to protect the environment by abatement and control of pollution through research, monitoring, standard setting, and enforcement activities.

Equity

Any right or claim to assets, as an interest in property or in a business, subject to the rights of prior creditors.

Equity Capital

Money invested by owners or others who share in profits; distinguished from debt capital.

Exclusive Right-of-Way

Property set aside for the exclusive usage of a transit mode without interference from sources outside the right-of-way.

Express Service

Transit operation over long distances with minimum number of stops.

Expressway

Highway with full or partially controlled access, some signalized grade intersections, and grade separations at major crossings.

Fair Market Value

The price at which a specific property would change hands between a willing, knowledgeable buyer and a willing, knowledgeable seller, neither being under any compulsion to buy or sell.

Floor Area Ratio (FAR)

The square foot amount of total floor area, including all stories, to each square foot of underlying land.

Feasibility Study

An analysis of a proposed project's economic prospects, typically used as the basis for a developer's decision to build. Also, in the broader cost-benefit framework appropriate for major public works facilities, the basis for a government's decision.

Feeder Systems

Part of the family of vehicles used to bring passengers to or from fast link stations in low or medium-density areas.

Fee Simple

Ownership of land, absolute and without limitation to any particular class of heirs.

Federal Share

The amount of money that a federal agency will contribute to a program of federal financial assistance.

Financing

In the private sector, the process through which a developer obtains the capital he needs to purchase land, design, build, and even manage a development project, either through loans (e.g., construction) or otherwise.

501(3) and 501(4) Corporations

Tax-exempt organizations recognized by the Internal Revenue Service as organized and operated exclusively for religious, charitable, educational, and other specified tax-exempt purposes. What distinguishes a 501(3) from a 502(4) corporation is that contributions to the former are tax deductible.

FHA (The Federal Housing Administration of the U.S. Department of Housing and Urban Development)

An agency of HUD which administers the housing insurance program, and the agency through which interest subsidies and rent supplements are secured.

FHWA

Federal Highway Administration, an agency of DOT which administers the federal highway program.

Freeway

Highway with full control of access, all crossroads grade-separated, and interchanges with major crossroads. Accommodates heavy traffic at high speeds.

Front-End Investment (or Front-End Costs)

Initial development costs incurred prior to realizing a return on investment from the improvement in question. These usually include fees for planning, preliminary architecture and engineering and filing, but may also extend to certain infrastructure required by a project, prior to profit realization.

General Contractor

A business enterprise usually under contract to improve land and/or construct buildings. Typically, the general contractor does not own the building or the land on which it is erected.

General Local Government

As usually defined, any city, county, town, township, parish, village, or other general-purpose political subdivision of the state or United States territory.

General Plan

A comprehensive, long-range plan officially recognized as a guide for the physical growth and development of a community, together with the basic regulatory and administrative controls needed to attain the physical objectives. Basic components of the plan are a land-use plan, thoroughfare plan, community facilities plan, and public improvements program; in some cases, economic and social components are added.

Grade

The vertical alignment of the track work.

Grade Separation

The intersection of two or more vertical alignments at different levels.

Grant-In-Aid

Cash payments, land donations, or in-kind contributions of improvements, services, or use of facilities made as a share of the cost of a project.

Ground Rent

The rent paid for the use of land which is leased rather than purchased.

Guideway

The surface or track, and the construction supporting it, in or upon which vehicles travel.

Headway

Time interval between two consecutive transit vehicles passing a given point on the route in the same direction.

Height of Building

Usually, the vertical distance measured from the highest of one of three places -- the street curb level, the established or mean street grade, or the average finished ground level adjoining the building if it sets back from the street line -- to the highest point of the roof.

Highest and Best Use

The use which is expected to provide the greatest net return to a piece of real property over a given period of time, taking into consideration applicable zoning for the site.

Housing Act of 1949

Federal law establishing (among other provisions), as national policy, "the goal of a decent home and a suitable living environment for every American family;" the federal financing of slum clearance activities by localities (now known as the "urban renewal program"); and public responsibility for relocating families displaced by clearance activities.

Housing Assistance Plan (HAP)

Basic document in a unit of general local government's application for participation in HUD's community development block grant program. The HAP includes such features as a survey of housing conditions in the applicant's community, an estimate of the needs for housing assistance of lower-income persons, a statement of goals for the development of new or rehabilitation of existing dwelling units, an indication of the general location of proposed housing development.

Housing Development Corporation (HDC)

A multipurpose, private housing corporation established to serve a given geographic area -- such as a neighborhood, city, state, or region -- by

providing technical assistance, lending seed money, and directly sponsoring housing developments. The board of directors generally includes civic leaders, the business community, and local government officials.

Hundred Percent Location

The location, usually within a central business district, with the highest land value.

HUD (The U.S. Department of Housing and Urban Development)

A federal agency established as part of the Housing Act of 1965. The overall purpose of HUD is to assist in providing for sound development of the nation's communities and metropolitan areas.

Improved Land

Land which has been prepared by development (as distinguished from raw land), or which has been developed for use by the erection of buildings and other improvements.

Improvements

That which is added to raw land, for example, buildings, sidewalks, sewers, streets, generally held to increase its value.

Incentive Zoning

Involves providing a developer with relief from restrictive zoning provisions in return for performance of functions deemed in the public interest.

Incompatible Land Use

Use of a tract of land that harms the value of other land in its vicinity.

Interface (transportation)

Transfer between transit lines or modes and stops or stations to accomplish such transfer.

Intermediate Capacity

A transit system, having a capacity between bus and subway standards.

Intermediate-Term Capital

Sources of financing typically available for a period of from 1 to 5 years (e.g. a "term loan," usually secured by pledges of fixed assets, to be paid back over the term of the loan).

Investor

Any individual or organization who lays out resources in order to obtain income, profit, or other benefits (in the development context) from real estate ventures.

Jitney

Generally a large car or van with a maximum capacity of, say, twelve passengers. Most often follows a fixed route, is hailed at curbside along that route, and provides a service that is very frequent but not formally scheduled.

Joint Development

The process of planning, executing and coordinating real estate development in or near transport corridors and station areas. Often involves a public/private sector partnership. Can also refer to project resulting from such a process.

Kiss-and-Ride

The practice of transit users who are driven to and from the transit station, usually by their spouses.

Land Banking

Acquiring land for future use, usually by a public body or agency for purposes such as controlling suburban sprawl or securing sites for anticipated public facilities.

Land-Cost-Write-Down

The difference between the cost of purchasing and clearing built up areas in urban renewal projects and the price of cleared land sold to developers. The difference in prices constitutes a subsidy, which under the urban renewal program was shared by HUD and a locality through its local public agency.

Land Development

The process of installing or constructing improvements on vacant land.

Land-Use Regulations

Zoning, official maps, and subdivision regulations to guide or control land development.

Land Use

The physical use to which land is allocated and legally controlled, usually by a municipal zoning ordinance.

Lease

A commitment, usually taking the form of a contract, by one party (the lessor) to turn over to another party (the lessee) use of real estate in return for rent or other considerations.

Lay-Over

The time spent by a transit vehicle for catch up to schedule.

Lender

In the development context, any individual or organization (e.g., mutual savings bank, life insurance company, pension or other trust funds, commercial bank, or savings and loan association), that invests its own funds in mortgages.

Level of Service

The standard by which reliability of schedule, capacity to carry passengers, speed, convenience and comfort is measured.

Leverage

The borrowing of a portion of the money required for the purchase of an investment at an interest rate less than the rate of return generated by the investment; the result is to raise the rate of return on the equity capital invested.

Local Grant-in-Aid

A contribution made by a state, local, or other entity to assist in the financing of a federally assisted project.

Local Station

A transit station serving the immediate surrounding area, usually through pedestrian access.

Long-Term Capital

Sources of financing typically available over more than 5 years (e.g. loans with final maturities of more than five years).

Major Tenant

A prestigious tenant in a commercial shopping center or building whose presence is expected to help attract other tenants to lease space in the same area.

Market Study

A projection of future supply and demand for a specific type of project, usually with a recommendation for volume of space to be sold or rented and sale or rental price.

Mass Transit

System of common carriers offering transportation to the public along established routes and on the basis of specific stops and schedules. Also called "public transportation."

Master Plan

A plan for the development of an area (e.g. city or county) that projects its future growth and makes provision for it by anticipating the public improvements that will be needed. As applied to a project (e.g. a joint development project) a master plan sets forth scale, types and timing of uses, related traffic, street and pedestrian improvements, and so forth.

Median Controls

Structural or painted length-wise division of a two-way street, arterial or freeway.

Mixed Use Development, or MXD

A relatively large-scale real estate project characterized by:

- Three or more major uses (e.g., sizeable revenue producers such as retail, office, residential, hotel/motel) which in well-planned projects are mutually supporting;
- Significant functional and physical integration of project components (e.g., interconnection of uses with pedestrian ways); and
- Development in conformance with a coherent plan (which frequently stipulates the type and scale of uses, permitted densities, and related items).

As used in municipal zoning ordinances, definitions of "mixed use buildings" or "mixed use development" vary, but most define these terms to include residential uses. In the New York City zoning resolution, on the other hand, a "mixed use building" refers to a building in a commercial district used partly for industrial and partly for commercial uses.

Mixed Use Zoning

A new and still-evolving zoning technique which typically permits an intensive integration of several land uses (usually including housing) and

provides incentives to this end, in the form of a density bonus and/or administrative relief (e.g. speeded-up review) for development proposals.

Modal Interface

The integration of several transportation modes at one point.

Modal Split

The percentage of trips made by public transit to and from a particular area.

Mortgage

An instrument recognized by law in which property is pledged as security (without giving up possession) for payment of a debt or obligation.

Mortgaging Out

Borrowing 100 percent of the cost of a property through a mortgage.

Multi-Use Project

Any real estate project with multiple uses, but not the three characteristics of an MXD as defined above. Illustratively, many "expanded shopping centers" have more than one use (e.g., they may contain office, hotel and even housing activities around their perimeter), but not a significant integration of project components. As another case, some smaller projects may not contain the "major" uses characteristic of an MXD. Such major uses should be large scale and should serve a broad market; a grocery store beneath an apartment building, for instance, would not constitute a major retail use.

New Town In Town

Concept of a new town implemented within a city area, such as in an urban renewal clearance area or a former military installation.

Official Map

Map prepared by an official planning body and adopted by a governing entity as a designation in advance of areas for later public acquisition of land for use as streets, parks, or other public facilities.

Off- Street Parking

Parking spaces located on private property, usually in an area provided especially for such use.

One-Way Streets

Traffic flows in one direction only.

Overall Economic Development Program (OEDP)

Program which, when approved by the EDA Administrator, entitles an area to assistance from the Economic Development Administration.

Paratransit

A loose conglomeration of transportation modes that do or could offer trips as an adjunct to transit and perhaps even to automobiles. Paratransit includes car pools, van pools, subscription buses, shared-ride services obtained by telephone (dial-a-ride) or by hailing on designated routes (jitneys), rental cars, and, most common of all, taxicabs.

Partial Taking

The condemnation of only a part of a property for a public purpose.

Passenger Speed

The average speed at which the passenger is transported between destinations.

Payment in Lieu of Taxes

Payments of a sum of money by a tax-exempt or tax-excused property owner to a taxing authority in amounts presumably commensurate with the cost of public services provided to such owner.

Peak Hour

Rush hour, usually in either A.M. or P.M.

Pricing Parking

Imposition of parking prices for off-street and/or on-street parking in or near high pollution areas.

Pricing Road Use

Imposition of charges for motor vehicle use of selected portions of urban street networks in or near high pollution areas.

Pro Forma

Latin words meaning "according to form"; in the development context, a projection of anticipated annual income, expenses and cash flow from an investment enterprise, indicating the form in which the data should be presented.

Progress Payments

Periodic payments from a construction loan made to a general contractor, based upon the progress in the completion of his contract; such payments earn interest to the lender as of the day the funds are disbursed. Also called "draw" or "take down."

Property Tax

This tax is the main source of revenue for many local governments, originally established in the U.S. as a general tax on land, buildings, and personal property. Gradually the tax became just on realty.

Public Land Assembly

The assembly by a governmental unit of development tracts under which the power of eminent domain or acquisition through negotiation is used as a means of assuring orderly private development.

Public Official

An appointed, elected, or employed representative of a public body or agency.

Public Use

Use that will serve the general public, as distinguished from only certain individuals.

Planned Unit Development (PUD) Ordinance

A zoning classification permitting flexibility of site design by combining building types and uses in ways that would be precluded by the detailed predeterminations of traditional zoning standards. For instance, instead of lot-by-lot requirements some such standards are applied to an entire zoned area. Typically, discretionary public review of proposed site plans or designs is also required. (Note that PUD here refers to the zoning process, not the real estate product typically associated with it.)

Quick-Take

Public acquisition of title immediately upon commencement of eminent domain proceedings.

Raw Land

Unimproved land, distinguished from improved area or land.

Resource Pooling Arrangements

These arrangements are also increasingly common as a means of amassing the capital necessary for undertaking a development project. Resources pooled can range from cash to "in kind".

Real Estate

Land and land improvements, including buildings and appurtenances. In addition to property held in fee simple, real estate comprises any interest in real property (e.g. a fee interest, a reversionary interest, a lessor's interest, life interest, or a contingent interest).

Redevelopment

Broadly, the clearance of all or most structures over a large area, and subsequent erection of new buildings. Narrowly (as under the former urban renewal program), this term includes improvements by private or public redevelopers to whom land has been made available, but not site or project improvements installed by a local public agency in preparing the land for disposition by sale or lease.

Regulating Parking

Reduction, by administrative action, of motor vehicle storage capacity, through control of off-street and/or on-street parking in certain areas.

Regulating Road Use

A reduction, by administrative action, of a road network used (e.g., through pedestrian malls, vehicle free zones) in certain areas.

Reuse Value

The price a local public agency places on land, cleared through the urban renewal process, to be sold to a redeveloper, based upon a disposition or reuse appraisal.

Reversible Lanes and Streets

One or more lanes are designated for movement in one direction during one part of the day and the opposite direction for another part of the day.

Right-of-Way (ROW)

Legal right to traverse the property of another. Also refers to the section of ground on which a railroad, highway, or street runs, and includes the way itself and shoulders belonging to it.

Sale-Leaseback

Transaction in which an investor-owner of a property sells land to another investor, then leases it back for a long term; the original investor maintains ownership of the improvements.

Sample

In statistics, a limited number of items or persons sufficient to be representative of the complete number, such as a percentage of a total.

Seed Capital

Money supplied by either public or private sources to help a development get off the ground. This capital is almost always supplied by a public or quasi-public development entity and/or the private developer who is "entrepreneuring" the project. Particularly in the early stages, it is typically difficult to obtain equity from other sources.

Service Charges

Generally, an approach to financing public facilities or services whereby payments are made to public bodies by abutting property owners. This technique is comparable to sewer or water tap fees in which a property owner pays a fee to connect with a municipal system.

Short-Term Capital

Sources of financing typically available for 1 year or less (e.g. borrowed funds to be repaid in less than 12 months).

Signs and Pavemarkings

Devices to provide drivers with advisory information to permit better selection of existing facilities.

Special Benefit Assessment

A special levy on property in a specific district that will benefit specifically from the improvements to be paid for by the tax, such as sewer or water facilities and streets.

Special Permits

Most development or use of improved land need only meet provisions of the zoning ordinance to be granted a building permit as a matter of right. Other development is allowed by special permit, only after public hearings, typically under conditions set forth in the zoning ordinance.

Spot Clearance

The removal of certain, usually slum, properties on a selective basis in an area dotted by such properties, as under a rehabilitation program.

Staged Acquisition

Public acquisition of title using eminent domain, but gradually as development proceeds, not all at once.

Standard Metropolitan Statistical Area (SMSA)

Area defined by the U.S. Bureau of the Census as an integrated economic and social unit with a recognized large population nucleus. An SMSA generally consists of one or more county areas, primarily non-agricultural and closely related to a central city or cities of 50,000 or more. (In New England, SMSA's consist of groups of cities and townships rather than of entire counties.)

Standby Commitment

A loan commitment of the difference between the minimum and maximum amount of a permanent loan, usually by a secondary lender or lending source. Also called "gap commitment."

Street Furniture

A collective term including the many above-ground items found in the right-of-way of a street, such as light fixtures, traffic signs, signals, signal control boxes, fire hydrants, benches, mail boxes, plant boxes, trash receptacles, etc.

Subdivision

A parcel or tract of land with improvements, which has been divided into lots suitable for whatever building purposes are approved and/or allowed by the zoning code by which it is covered.

Subdivision Regulations

Local ordinances, similar to zoning ordinances, governing the process by which building lots are created out of large land tracts — including site design and relationships and allocation of costs or public facilities between the subdivider, local taxpayers, and the governing body.

Subsurface Right

In real estate, the right to ownership of everything beneath the surface of the property.

Superblock

A very large block within a city; frequently formed by combining or consolidating several smaller blocks through an urban renewal program.

Tax Abatement

Concession by a taxing authority under which a property is exempt from local taxes or pays a reduced rate of taxes for a specified period of time.

Take Out

Permanent financing which replaces an interim or construction loan.

Tax Base

The assessed valuation of all real estate located within the jurisdiction of a taxing authority.

Tax Increment Financing

Relies on the real estate property tax system by earmarking the incremental increase in tax revenues from new development to pay for public investment to assist that development.

Terminal Station

A station usually located at each end of the transit line.

Time-Series Analysis

Review of data so as to identify statistical variations over a period of time.

Total Development Cost (TDC)

The total cost of development of a given project, including the costs of land, planning, all fees, construction financing, construction, landscaping, and off-site improvements.

Tract

An area of land, generally of large size.

Trip Purpose

The motivation to make a trip (e.g. going to work).

Turning Movement Controls

Any of several methods, ranging from prohibition of turning at peak hours to provision of special right and left turning lanes at all times.

Turnkey Project

Project in which all components are organized and developed by one entity and sold to another for a lump-sum price, at which point the developer "turns the keys" over to the purchaser in exchange for payment.

UMTA (Urban Mass Transportation Administration of the U. S. Department of Transportation

A federal agency which operates under authority of the Urban Mass Transportation Act of 1964 as amended, and was established as one component of a Presidential Reorganization Plan in 1968. The missions of UMTA are to assist in the development of improved mass transportation facilities, equipment, techniques, methods; to encourage the planning and establishment of area-wide urban mass transportation systems; and to provide assistance to state and local governments in financing the capital and operating costs of such systems.

Underwriting

Analysis of the extent of risk assumed in connection with a loan; the process of preparing or arranging the conditions of a mortgage and the subsequent decision to approve or disapprove a loan application.

Uniform Relocation and Real Property Acquisition Policies Act of 1970

An act to provide for uniform and equitable treatment of persons displaced from their homes, businesses, or farms by federal and federally-assisted programs and to establish uniform and equitable land acquisition policies for federal and federally-assisted programs. Approved January 2, 1971, and subsequently amended.

Urban Area

According to the U.S. Bureau of Census, places with populations of 2500 or more, whether incorporated or not.

Urban Renewal

Process through which deteriorated neighborhoods are upgraded through clearance and redevelopment, rehabilitation or similar means. Under the initial urban renewal program, legislated in 1949, there were three basic approaches to revitalizing deteriorating neighborhoods: redevelopment, typically through clearance of all or more structures over a large area (or areas) and eventual redevelopment with new construction and/or open space; rehabilitation, typically through primary emphasis on significantly upgrading existing buildings through repair and improvement of public facilities, possibly with some spot clearance of the worst structures; and conservation typically through relatively minor improvements in an area that is already in good conditions, thereby emphasizing maintenance of the existing building inventory.

Zoning

Delineation of a community's land into portions having certain rules and regulations on the type of land development allowed. Such rules govern the

physical configuration of the buildings, the amount of vacant land required, and may prescribe certain requirements for construction.

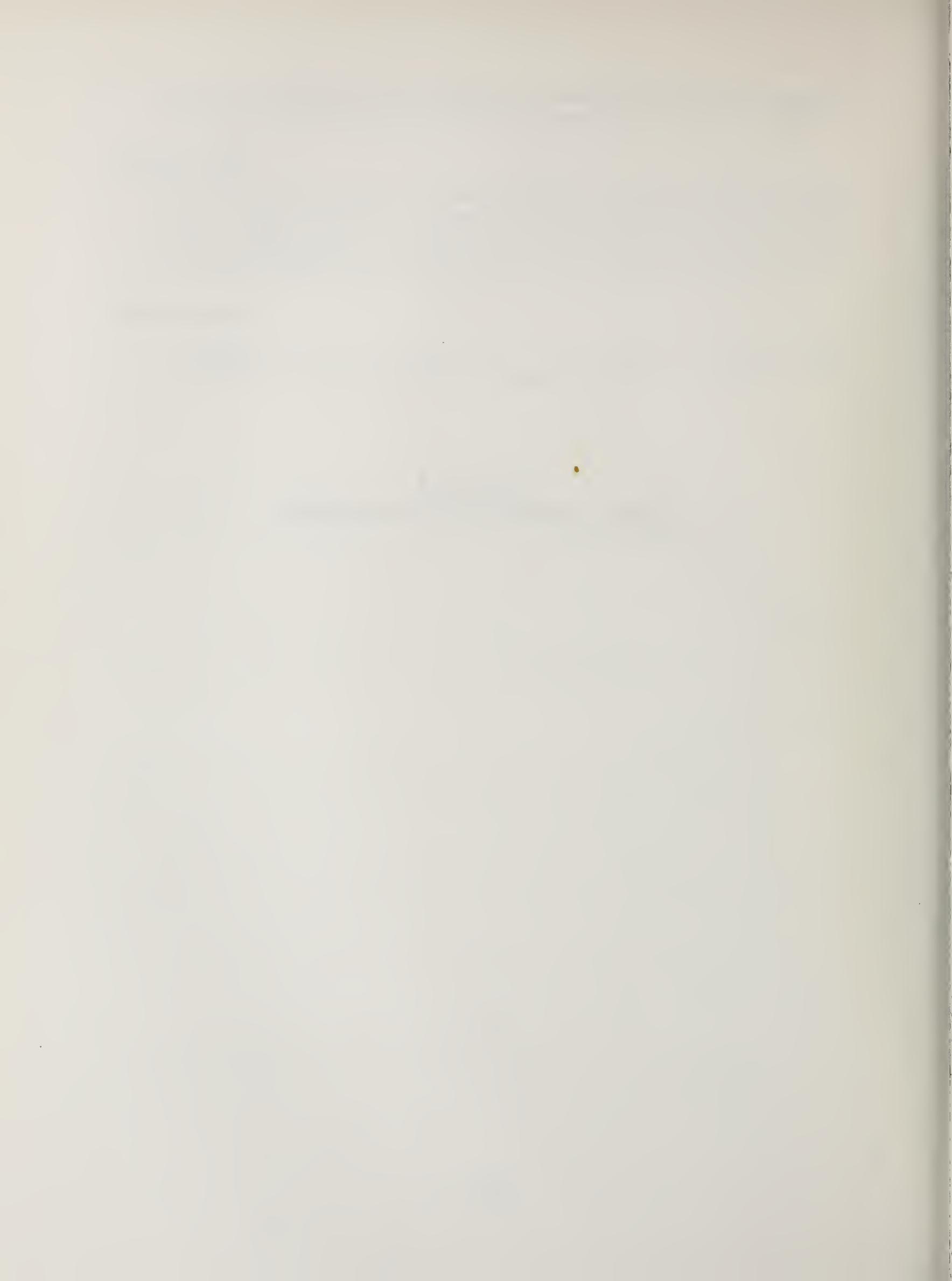
Zoning Districts

Areas within which conventional zoning applies. Typically, cities are divided into at least three basic zoning districts (residential, commercial and manufacturing), which in turn are further subdivided into more fine-grained categories. Development within these districts is usually regulated by use, bulk, parking and related requirements.

Zoning Variance

A modification of or variation from the provisions of existing zoning regulations — as distinguished from a change in zoning.

APPENDIX B
STUDY APPROACH AND METHODOLOGY



STUDY APPROACH AND METHODOLOGY

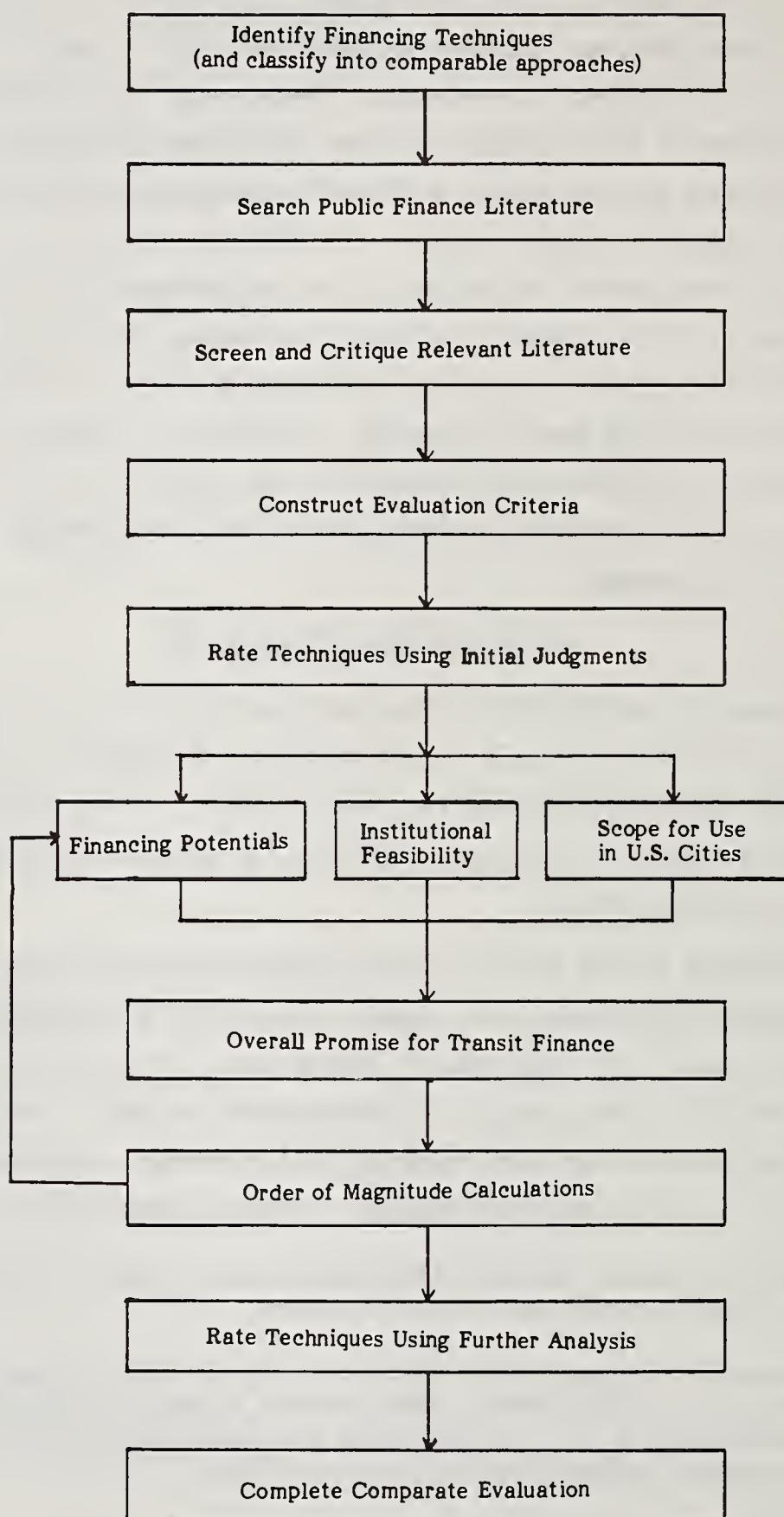
The primary object of this catalog was to evaluate the financing potential, institutional feasibility, and possible applications of the innovative techniques to transit finance. In order to accomplish these ends, the study began with an exhaustive review of the existing literature, which was specifically scrutinized in light of experience of the authors in financing large-scale capital improvements. Some initial judgments were formed on these techniques, which were then subjected to a more critical evaluation of their advantages and disadvantages. An important part of this approach involved developing illustrations of financing potentials, drawing on both the present experience with these techniques (e.g. using Toronto's long term land leasing program), and "order of magnitude" calculations for key findings and conclusions contained in the main body of this report. This appendix furnishes a more detailed description of this methodology. (For overview, see Exhibit B.1, following.)

Identification of Techniques

As a basis for reviewing the literature and experience, a first step in this assignment was to identify the so-called innovative techniques, to define them in terms of their financing potential for transit, and to classify the techniques into several broad categories: 1) land use regulation, 2) taxes, assessments and charges, and 3) public land acquisition.

As employed in this catalog, each category groups together a "family" of similar financing techniques with roughly comparable administrative approaches and requisite powers (e.g. police power, taxing power, eminent domain power) from the standpoint of a local transit or development entity. Although there are significant variations within each category, and techniques are commonly combined in practice, the utility of this classification scheme is several-fold:

- First, it groups financing techniques into 3 broad categories, each basically different from the others;
- Second, it serves as a convenient point of reference for community policy makers, and provides a base for assessing the literature (e.g. is the experience with each financing approach adequately reflected by the literature?); and



Source: Gladstone Associates.

- Finally, it provides a framework for beginning to codify "conventional wisdom", thereby facilitating improvements in local practice.

Like all classification schemes, however, the one employed for this catalog is somewhat arbitrary, and could be adjusted to suit different objectives.

Literature Search

A starting point in this step was our private library, consisting of materials prepared for previous studies, published and unpublished reports, professional books and journal articles and major reference works of relevance to the financing field. Also searched were major libraries in the Washington metropolitan area; of particular importance were the Transportation Research Board library and the Department of Transportation library. Certain publications merit special mention in this review; among them are the recent issues of Governmental Finance, the Journal of the American Institute of Planners, and Practicing Planner. Another keystone in the search was Gladstone Associates' Redevelopment, Rehabilitation and Conservation: A Compendium and Annotated Bibliography, prepared for the U.S. Department of Housing and Urban Development in 1975, which surveyed and assessed the literature on urban development programs, financing aids and legal issues. Entries eventually cited in this catalog were winnowed down from a list of about 100 items.

Literature Screen and Critique

A subsequent task was to select literature to be reviewed according to two basic criteria: whether it would be relevant for community decision makers, and whether (with regard to the financing technique reviewed) it identified experience of interest. Ideally, in addition to discussing a given financing technique, documents would assess potential problems, constraints, and degree of transferability (e.g. can the technique be replicated elsewhere, with reasonable modification

of local circumstance?). ^{1/} Not surprisingly, such rigorous criteria proved too restrictive for the available literature, so we reserved for annotation in this catalog only those documents considered very important for local officials. The resulting citations, contained in the feature boxes at the end of each chapter, are not intended to be comprehensive but provide a set of "basic readings" in each subject area.

Drawing on the literature reviewed and experience of the authors in the public finance field, a preliminary assessment of techniques was conducted. This analysis was extended to encompass a more systematic comparative evaluation of techniques, as discussed below.

Comparative Evaluation of Techniques

A significant aim of this study has been to assess in general the financing potentials and institutional feasibility of innovative transit financing techniques. Clearly, the precise application and promise of each technique varies considerably from situation to situation, depending on a host of area-specific factors discussed throughout this volume. Also, considerable differences of opinion can (and do) exist as to which financing techniques are the most acceptable and equitable from an administrative, legal and political perspective.

Most techniques, however, can be examined objectively on a general basis, even if they are not susceptible to a rigorous analysis at this level. An assessment such as contained in this catalog should not be considered a substitute for

1/ More specifically, "ideal" literature for local policy makers might conform to the following criteria:

- Discuss (and desirably diagnose) the financing problem — or financial requirements — being addressed, together with specific objectives of the public sector in securing a solution.
- Identify several financing alternatives and the constraints associated with each (e.g. costs, administrative feasibility, political acceptability).
- Discuss transferability of technique(s) (e.g. can the financing technique be relocated, with reasonable modifications to local circumstance, in other communities).

These three criteria — and particularly the third — require identifying those aspects of the situation that are generalizable as distinct from specific to the local area.

experienced analysis and professional judgment of specific financing schemes, ^{1/} but it can point to the most promising opportunities and constraints as a guide to subsequent financing planning. In order to develop this general assessment, a four step evaluation was used. After identifying and defining the techniques several other criteria were constructed. The "pro-con arguments" were developed to set forth salient advantages and disadvantages for the promising techniques. Finally, ratings were assigned (high, moderate, or low) to reflect basic differences among the innovative techniques under consideration.

Evaluation Criteria

After reviewing the relevant literature, three primary criteria were selected and defined as a simplified basis for judging the apparent promise of innovative financing techniques. A first was transit financing potentials, a composite criterion covering:

- income or revenue provision: a technique's ability to pay for transit-related improvements or amenities directly, or to contribute to operating costs, through realization of income (e.g. from transit-related real estate projects) or revenues (e.g. from transit-related taxes or assessments); ^{2/}
- improvement provision: a technique's ability to provide indirectly (or "in kind") for improvements or amenities, typically at cost to a private developer;
- income or revenue reliability: the stability and dependability associated with a technique's revenue or income stream; conversely, the risk and uncertainty associated with realizing such cash flows (and attendant potential for bonding).

1/ For example, sound financing plans for transit need to be formulated in accord with applicable constitutional and statutory limits, realistic estimates of the revenue productivity of each technique and available administrative capabilities, to name but a few factors. Failure to account for specialized circumstances in each case is almost certainly a bankrupt approach.

2/ As suggested by this latter example, revenue or income may be one-time (e.g. a lump sum special assessment) or over time (e.g. taxes over an extended period).

Also encompassed in this criterion were other financing considerations such as a technique's capital resource requirement, the liquidity and manageability of the investment and so forth.

A second composite criterion was institutional feasibility covering:

- Administration requirements: What administrative capabilities and special staff skills are required on the part of a transit or development entity to implement a given technique?
- Legal requirements: Is specific state or local enabling legislation required; what statutory or judicial restrictions may exist on activities of a transit or development entity?
- Political requirements: Does implementing a technique require voter approval such as a city-wide referendum; what potential controversy could be associated with a particular technique?

The third criterion was scope for application in U.S. cities — in light of the above and other considerations, how widely will an innovative financing technique in all likelihood be employed?

Finally, a determination was made as to the technique's overall promise for transit finance (e.g. all things considered, what techniques appear most useful for transit financing purposes). This summary evaluation, which is clearly not a substitute for more detailed analysis in a local situation, simply indicates which techniques should be considered as more important than others in preparing a financial plan.

Pro's and Con's

In applying these criteria, a key step concerned "pros and cons," when the advantages and disadvantages of each technique were identified and assessed by the study team. In this evaluation, each technique was examined from the standpoint of the transit or development entity. Hence, some features viewed as potential advantages from this perspective may be seen as disadvantages from another vantage point (e.g. the public-at-large). For example, a potential advantage cited for tax increment financing is that the technique need not always require voter approval (depending, of course, on applicable state and local law) and hence could be implemented relatively easily by a transit or development entity. From another

perspective, though, this lack of voter accountability could be envisaged as a liability. Citizen groups in some states have expressed concern that tax increment financing does not provide for adequate voter accountability, since officials of semi-autonomous agencies are often appointed and not elected. Consequently, their argument goes, citizens have little control over decisions which significantly affect the amount of tax revenues available to the city.

Assign Summary Ratings

With respect to financing potential, this rough rating was assigned to reflect whether, for a metro area of about a population of 3 million (as specified subsequently in this Appendix), annual income or revenues associated with a given technique were considered:

- high (millions of dollars);
- moderate (hundreds of thousands of dollars); or
- low (tens of thousands of dollars or less).

The above approximations are exclusive of possible bonding, and are based on experience to date with each technique and order of magnitude calculations contained in this Appendix.

It is important to recognize the approximation entailed here, since empirical data do not exist on the transit financing potential for many of these innovative techniques, and extensive case studies were not conducted for the present assignment. And even with empirical data, general conclusions can be misleading, since a technique's productivity will depend on specific factors such as the existing tax base and applicable rates.

Nonetheless, broad characterizations appear useful in the following respect: 1) as a gross screen of those techniques capable of relatively high income or revenue generation; and 2) As a reminder that an accurate analysis of a technique's transit financing potential should include actual data with respect to a specific area (e.g. taxable assessed valuations), realistic tax rates, and explicit assumptions about growth and inflation over time. In addition — and especially if cash flow from a technique is considered for bonding — analysis of other key issues may be in order (e.g. is cash flow stable and dependable, does it keep pace with inflation?).

With respect to institutional feasibility, while administrative and legal costs are typically not quantified, it is possible to make an informed judgment as to whether a given technique can be implemented in a general sense. Such judgments are even more sound if based on specific legal requirements of a given area, of course. But for present purposes, ratings were assigned as follows:

- High institutional feasibility: builds on existing administrative capabilities and organizations.
- Moderate institutional feasibility: extends above but entails significant added institutional requirements.
- Low institutional feasibility: requires substantially new (or different) administrative resources, or organizational arrangements and/or enabling legislation.

To illustrate this, one could compare the institutional feasibility of the dedicated property tax and tax increment financing. The first has a high institutional feasibility, being an extension of existing laws and government organizations. Tax increment financing, though, requires state enabling legislation, may encounter some local political resistance, entails a definite potential for abuse, and thus is rated a low under institutional feasibility.

In reviewing a technique's scope for application for U.S. cities, a rating was assigned to reflect whether (in light of above and other factors) a technique would be considered:

- high promise: could be implemented in most (e.g. 50 percent or more) localities with fixed guideway systems;
- moderate promise: could be implemented in many (e.g. 25-50 percent) such localities; or
- low promise: could be implemented in a few (e.g. less than 25 percent) such localities.

As a general matter, localities with fixed guideways systems (either present or prospective) would likely fall within relatively large, densely populated metropolitan areas to begin with, where local government capabilities are already more developed than in most communities across the country.

"Order of Magnitude" Calculations

As part of the comparative evaluation process, a methodology was developed to dimension the financing potentials associated with five promising innovative techniques, notably incentive zoning, dedicated property tax, tax increment financing, special benefit assessment and lease or sale of air rights.

To scale these financing potentials, a prototypical U.S. city was devised, with a metropolitan area population of 3 million and a central city with perhaps one-fourth to one-third that number (or about 750,000 to 1 million people). The central city comprises a land area of some 100 square miles, most of it substantially built-up, and is governed by a municipal corporation. Its downtown and immediate "frame area" have been designated as the site for a new fixed guideway, perhaps taking the form of extension to an existing rail line, or a "light rail" segment or a DPM (downtown people mover) system.

The proposed fixed guideway involves 10 transit stations ^{1/}, only a few of which have development potentials, as will be shown below. All stations, again, fall within the central city's downtown core and immediately adjacent areas, which comprise the transit impact area for purposes of analysis.

Market Research

To dimension financing potentials for many of the innovative techniques calls for market research of local land use markets, ^{2/} and specifically the scale and

- 1/ By way of comparison, recent fixed guideway systems include San Francisco's BART (34 stations) and the Washington area's METRO (86 planned stations with 35 in the central city, but only about a dozen in the densely developed downtown district). Recent DPM proposals which have been approved by UMTA are Cleveland (10 stations), Houston (8), Los Angeles (11), and St. Paul (10).
- 2/ Usually reported in a market study, which forecasts future demand for specific real estate product, along with recommendations as to quantity to be sold or leased and prices to be charged. Also called a "marketability study."

type of private investment that could be attracted to land around transit facilities. In this case, real estate markets are assumed to be strong for the prototypical area, particularly for office development — which typically constitutes the "cornerstone use" in downtown commercial projects. Market and development potentials for this use are shown in Exhibit B.2, drawing upon the earlier example devised in Chapter 4 of this catalog.

Financial Analysis

A related technique for testing the financing potential of some innovative techniques — notably those involving land or building development -- is through pro-forma financial analysis. Pro-forma analysis is a standard type of feasibility analysis which is frequently employed in the development industry, usually for preliminary planning purposes. Its uses are flexible, however, and include many applications in the public sector as will be shown below.

Basically, pro-forma analysis is a means of relating anticipated revenues, operating expenses and improvements costs for any income-producing property. As a static analysis, "pro-formas" represent the project's economics during a typical, early year after operations have been stabilized. Although various elements in the analysis — such as revenues and operating costs — may change during a project's life cycle, the simplifying assumption is made for sake of preliminary analysis that these relations will stay constant. ^{1/}

Although usually used to test project feasibility, pro-forma analysis is also a powerful tool which can enable public officials, investors and others in land development to examine the impact of public policies upon urban development. For instance, possible public sector uses of this analytical tool could include a determination of:

- the minimum development densities which would be feasible for private investment at specific locations;

1/ The simplifying assumptions are frequently relaxed in subsequent feasibility studies through the use of DCF (discounted cash flow) analysis, which spreads revenues and expenses out on a year-by-year basis and considers the impact of taxes on the flow of cash through the project.

Exhibit B.2

OFFICE MARKET AND DEVELOPMENT POTENTIALS ^{1/}
FOR PROTOTYPICAL METRO, CENTRAL CITY
AND TRANSIT IMPACT AREAS
1980-1990 ^{2/}

<u>Area</u>	<u>Projected Annual Absorption</u>
A. Metro Area	3,000,000 s.f.
B. Central Area	1,000,000 s.f.
C. Transit Impact Area	680,000 s.f.

Note: Projections above assume transit. For further details, see example developed in Exhibit 4.1.

1/ In terminology of market research, "market potential" is the expected total sales of a commodity or service during a stated period of time (e.g. office space, measured in square feet in the case of above). "Development potential" is the amount of market potential which may be captured for a specific site or area (e.g. sites in the central area transit corridor, in the above case).

2/ Assumes fixed guideway completed by 1980, so that 1980-1990 time frame coincides with first 10 years of transit operation.

Source: Gladstone Associates.

- the potential impact of various types of public assistance on a developer's capital requirements, cash flow, or leverage; or
- the relationship between zoning and land values, and specifically the extent of incentive to private developers under incentive zoning provisions. 1/

The obverse of this last item — the amount developers would be willing to pay for various forms of public assistance -- is obviously of interest here, since it reflects possible financing potentials. For example, what costs would a developer be willing to incur for transit-related improvements, in return for a density bonus for building near a station stop? This amount, a portion of a property's residual value, is derived through pro-forma financial analysis, as illustrated in Exhibit B.3. This project portrayed in this analysis consists of a 12-story office building containing a floor area of some 230,000 gross square feet. Lot size for the project is 23,000 square feet, so that FAR (floor-to-area-ratio) equals 10 (230,000 / 23,000).

Public Finance Evaluation

A final analytical step in dimensioning the financing potentials of innovative tools is to evaluate these possibilities in combination. Such combined potentials, it should be noted, are not necessarily additive. This evaluation, which should select the appropriate financing package -- considering transit's financial requirements and local resources such as time, money and expertise -- is well beyond the scope of this study. It should be understood in reviewing the following, however, that:

- some financing potentials are expressed in lump sum payments, others in a continuing revenue stream (two significantly different financial concepts);
- some financing techniques may be used in concert (e.g. incentive zoning and a dedicated property tax), while others may be mutually exclusive (e.g. tax increment financing and special benefit assessment, which would tax the same source twice); and
- most techniques are contingent on available development potentials for the transit impact area (or 680,000 sq.ft. of office space annually, in this case which will constrain total financing potentials).

1/ Pro-forma analysis can also be employed to explicitly test and rank a range of development incentives in cost-effectiveness terms. For discussion, see Appendix C, section on "Cost-Effectiveness Analysis."

PRO FORMA FINANCIAL ANALYSIS
FOR PROTOTYPICAL OFFICE BUILDING
(230,000 gross square feet)

1. Net Operating Income

A. Annual Gross Income from 200,000 s.f. @ \$10/s.f. ^{1/}	\$ 2,000,000
B. Less Vacancy and Collection Allowance @ 5%	\$ 100,000
C. Effective Gross Income	\$ 1,900,000
D. Less Operating Expenses and Real Estate Taxes @\$3.50/s.f. of Rentable Area	\$ 700,000
E. Net Operating Income	\$ 1,200,000

2. Economic Value and Financing

A. Economic Value @ 10% Capitalization Rate	\$12,000,000
B. Mortgage @ 75% of Economic Value	\$ 9,000,000
C. Annual Debt Service @ 10% Constant ^{2/}	\$ 900,000

3. Funds After Debt Service

A. Net Operating Income	\$ 1,200,000
B. Annual Debt Service	\$ 900,000
C. Funds after Debt Service ("Cash Flow")	\$ 300,000

4. Supportable Development Costs

A. Supportable Equity from Funds After Debt Service @ 15%	\$ 2,000,000
B. Mortgage Proceeds	\$ 9,000,000
C. Supportable Development Costs	\$11,000,000

5. Estimated Improvement Costs

A. Estimated Construction Costs @ \$32/s.f.	\$ 7,360,000
B. Estimated Non-Construction Costs @ 35% of Construction Costs ^{3/}	\$ 2,580,000
C. Estimated Improvement Costs ^{4/}	\$ 9,940,000

6. Residual Value

A. Supportable Development Costs ^{5/}	\$11,000,000
B. Less Estimated Improvement Costs	\$ 9,940,000
C. Residual Value	\$ 1,060,000

1/ 200,000 square feet of leasable office space with an 87 percent building efficiency.

2/ Illustratively, a mortgage at 9.5 percent interest and thirty year term.

3/ Includes taxes, financing and insurance during construction at 20 percent; fees, permits, and architect/engineering work at 10 percent; and development overhead at 5 percent.

4/ Total improvement cost is \$43/s.f.

5/ Development costs = land costs (including residual value) and improvement costs.

Source: Gladstone Associates.

In this latter connection, annual development potentials may be fully absorbed by "density bonus buildings" (see section below on incentive zoning), leaving no added support for other tools (e.g. long term land leasing) over the period in question. Hence, transit or development entities contemplating these tools would want to consider carefully both packaging the financing tools in a complimentary fashion, and allocating available development potentials accordingly among available station areas.

Incentive Zoning ^{1/}

Incentive zoning involves altering land use regulations in a manner that proves beneficial to developers, in return for development considered to be in the public interest. Incentives can include a reduction in parking requirements for a speeded-up process of development review, but most commonly take the form of increases in the amount of allowable density (the case analyzed here).

The increases, in turn, typically translate into increased residual values for the real estate in question, which can be determined through pro-forma financial analysis, as shown below. These residual values, then, become a basis for estimating what a developer would pay for by way of transit-related improvements (or other public amenities or uses) in return of the density bonus.

The present analysis takes the office building outlined earlier at an "as-of-right" FAR of 10. Exhibit B.4 shows the effect of increasing the allowable density by 20 percent. As shown, the bottom line residual values increase to almost \$1.3 million, up from the previous level of \$1.1 million.

Specifically, value to the developers is reflected in increasing residuals, which represent the amount a developer could conceivably pay for land at a stated return on equity, given indicated construction costs, financing terms and so forth. The sensitivity of these residual values to changes in allowable density, or FAR, is shown in Exhibit B.5. In the previous instance, a twenty percent bonus increases

1/ Though incentive zoning is analyzed in this section, a similar approach could be taken to special district zoning and analogous land use regulations.

PRO FORMA FINANCIAL ANALYSIS
FOR PROTOTYPICAL OFFICE BUILDING
WITH A 20% DENSITY BONUS
(276,000 gross square feet) ^{1/}

1. Net Operating Income

A. Annual Gross Income from 240,000 @ \$10/s.f.	\$ 2,400,000
B. Less Vacancy and Collection Allowance @ 5%	<u>\$ 120,000</u>
C. Effective Gross Income	\$ 2,280,000
D. Less Operating Expense and Real Estate Taxes @\$3,50/s.f. of Rentable Area.	<u>\$ 840,000</u>
E. Net Operating Income	\$ 1,440,000

2. Economic Value and Financing

A. Economic Value @10% Capitalization Rate	\$14,400,000
B. Mortgage @75% of Economic Value	<u>\$10,800,000</u>
C. Annual Debt Service @10% Constant	\$ 1,080,000

3. Funds After Debt Service

A. Net Operating Income	\$ 1,440,000
B. Annual Debt Service	<u>\$ 1,080,000</u>
C. Funds after Debt Service ("Cash Flow")	\$ 360,000

4. Supportable Development Costs

A. Supportable Equity from Funds after Debt Service at 15%	\$ 2,400,000
B. Mortgage Proceeds	<u>\$10,800,000</u>
C. Supportable Development Costs	\$13,200,000

5. Estimated Improvement Cost

A. Construction Cost @\$32/s.f.	\$ 8,830,000
B. Non-Construction cost @35% of Construction Costs	<u>\$ 3,090,000</u>
C. Estimated Improvement Costs	\$11,920,000

6. Residual Values

A. Supportable Development Costs	\$13,200,000
B. Estimated Improvement Costs	<u>\$11,920,000</u>
C. Residual Value	\$ 1,280,000

Note: Assumption as indicated in Exhibit B.4, unless otherwise indicated.

^{1/} A 20 percent increase in FAR, granted as a density bonus in this case, would increase gross built area from 230,000 s.f. to 276,000 s.f., with net rentable area increasing from 200,000 to 235,000 s.f. respectively.

residual value by \$220,000 from \$1,060,000 to \$1,280,000. For simplicity of analysis, estimated improvement costs remain constant on a unit basis for each case. This represents a conservative assumption, as certain efficiencies may be realized in constructing a larger building (e.g. obtaining a higher efficiency ratio, 1/ realizing economies by spreading fixed costs such as permits, architectural, and engineering fees across a fixed base).

Summarizing the steps above, pro-forma financial analysis for this project suggests that its developer would be willing to pay for up to \$220,000 worth of transit-related improvements in return for a density bonus of 20 percent. While this order of magnitude estimate is entirely appropriate for present purposes, it should be recognized that several factors will affect the amount a developer would be willing to pay in practice. First, land costs may eventually rise to reflect higher residuals obtaining through density bonus opportunities. Second, there may be a somewhat higher risk associated with leasing a larger amount of space. Finally, some incentive must remain in order to interest the developer in complying with incentive zoning provisions. Thus, the amount the developer would be willing to pay for transit-related improvements to entitle the project to a 20 percent bonus, may be less in practice than the indicated \$220,000 increase in residuals. On the other hand, any deficiencies realized could provide a cushion to absorb some of the limiting factors identified above.

The foregoing analysis for a single project can now be extended to over space and time to the prototypical impact area, and the first 10 years of transit operations. For simplicity of analysis, it is assumed that all future development in the impact area takes the form of "building blocks" at a scale of the prototypical office building (276,000 sq.ft., with density bonus) shown above. Annual financing potentials, under these assumptions are illustrated in Exhibit B.6, following.

A more extensive analysis, of course, would cover a longer time period of perhaps up to ten years after opening of transit service. To realistically identify financing potentials, such analysis should consider such specific factors as:

1/ Refers to the ratio of net rentable area to gross floor area, both on a floor-by-floor and total building basis.

Exhibit B.5

SENSITIVITY ANALYSIS TO SHOW
EFFECT OF CHANGES IN GROSS BUILT AREA
(E.G., THROUGH DENSITY BONUS) ON RESIDUAL VALUES
FOR PROTOTYPICAL OFFICE BUILDING

<u>Gross Built Area</u>	<u>Net Operating Income</u>	<u>Supportable Development Costs 3/</u>	<u>Estimated Improvement Costs</u>	<u>Residual Value</u>	<u>Increase in Residual Value Over Value For 230,000 s.f. Building</u>
230,000 s.f.	\$1,200,000	\$11,000,000	\$ 9,940,000	\$1,060,000	--
253,000 s.f. <u>1/</u>	\$1,320,000	\$12,100,000	\$10,930,000	\$1,170,000	\$110,000
276,000 s.f. <u>2/</u>	\$1,440,000	\$13,200,000	\$11,920,000	\$1,280,000	\$220,000

Note: Refers to prototypical office project with an "as of right" allowable FAR of 10.

1/ Corresponds to a density bonus of 10 percent.

2/ Corresponds to a density bonus of 20 percent.

3/ Assumes a return on equity of 15 percent and a thirty year mortgage at 9.5 percent interest.

Source: Gladstone Associates.

- transit station areas which could realistically receive development (in the prototypical case presented here with 10 stops, perhaps only 2-3 can be developed, given land availability, zoning constraints and so forth); 1/
- available building sites sufficiently proximate to transit stations so as to benefit from a density bonus (these can be identified through a local survey, and generally do not extend beyond a 1,000/ft. radius of stops); and
- the time-value of money (whereby dollars received tomorrow are worth less than dollars received today).

Illustrating this last point, revenues received more than 10 years after transit's opening would be worth less than half their present value in defraying transit costs, under certain assumptions (\$100 x present value factor of .48 at year 11, assuming 7 percent discount rate = 48¢).

Dedicated Property Tax

To calculate orders of magnitude for this technique, a special small-area tax district was devised, based on the CUTD (Chicago Urban Transportation District) model. That dedicated property tax has produced some \$2-3 million annually for transit in recent years, at the same rate used in this example but over a substantially larger area. For present purposes, in recognition of the built-up area characteristically served by a downtown fixed guideway system, the small area taxing district was scaled at 5 percent the land area of the prototypical central city. The resulting district of 5 square miles, or a reach of some 3,200 acres, would yield annual revenues of \$1 million (see Exhibit B.7).

Tax Increment Financing

Tax increment financing is considered in the prototypical case as appropriate for one station where land is undeveloped and development potentials are available, but not sufficiently strong to support private investment without some form of public assistance. At build out, the project will total some 1 million gross sq.ft. of new construction on 10 acres. Annual revenues associated with the incremental property taxes from this project on the order of \$1 million are shown in Exhibit B.8.

1/ A special case concerns competing projects on transportation air rights (should the entity be leasing or selling such space).

ANNUAL FINANCING POTENTIALS
INCENTIVE ZONING PROVISIONS
PROTOTYPICAL TRANSIT IMPACT AREA

A. Increase in residual value per project	<u>1/</u>	\$220,000
B. Number of projects per year within immediate vicinity of transit station stop	<u>2/</u>	2
C. Annual financing potentials (AxB)		\$440,000

1/ Based on Exhibit B.5, last column, bottom line, using density bonus of 20 percent.

2/ Based on indicated development potentials of 680,000 s.f. annually, somewhat more than two office buildings of 276,000 gross sq.ft. could be absorbed each year ($680,000 - 276,000 = 2.5$). A more conservative, and appropriate, assumption would recognize that only a portion of annual development potentials are likely to be realized on sites sufficiently close to transit stations so as to benefit from a density bonus.

Source: Gladstone Associates.

ANNUAL FINANCING POTENTIALS
DEDICATED PROPERTY TAX
PROTOTYPICAL TRANSIT IMPACT AREA

A. Land area of dedicated property tax district <u>1/</u>	5 square miles
B. Market value of real property in district <u>2/</u>	\$2,000,000,000
C. Assessed value at 50% of market value <u>3/</u>	\$1,000,000,000
D. Dedicated property tax rate at 10¢ per assessed \$100 <u>4/</u>	.001
E. Annual financing potentials (CxD)	\$ 1,000,000

1/ Scaled at 5 percent of the prototypical city's total land area of 100 square miles. By way of comparison, the Chicago Urban Transportation District is 9.5 square miles. The district covers 4 percent of the total land area of the city, some 222 square miles. Relative to this scale, the size of other U.S. cities is:

Atlanta	128 square miles
Buffalo	41 square miles
Detroit	140 square miles
Milwaukee	94 square miles
Pittsburgh	55 square miles
St. Louis	61 square miles
San Francisco	45 square miles

Thus, a five square mile district in these cities would cover from 5-10 percent of total land area.

2/ As of designation as special taxing district.

3/ Assessed value for the Chicago Urban Transportation District was \$3.5 billion in 1975.

4/ CUTD tax set at the rate of \$.092 per \$100 of assessed value as of 1975.

Source: Gladstone Associates.

ANNUAL FINANCING POTENTIALS
TAX INCREMENT FINANCING
PROTOTYPICAL TRANSIT IMPACT AREA

A. Land area of tax-increment-financing project	10 acres
B. Market value of real property in project area <u>1/</u>	\$ 20,000,000
C. Present assessed value @ 50% of market value (AxB)	\$ 10,000,000
D. Projected assessed value, at build-out	\$ 30,000,000
E. Increase in projected over present assessed value (D-C)	\$ 20,000,000
F. Property tax rate at \$5 per assessed \$100	.05
G. Annual Financing Potentials <u>2/</u>	\$ 1,000,000

1/ A\$2 million an acre or almost \$46 per square foot, with most of the value probably in the land as distinct from improvements.

2/ Exclusive of bonding.

Source: Gladstone Associates.

One caveat applies to revenues from this technique, and to a lesser extent to many other innovative tools in this catalog: to the degree public investments other than transit (e.g. land-cost-write-downs, provision of streets and utilities) are required to catalyze private development correspondingly less than 100 percent of annual financing potentials would be available for transit purposes.

Special Benefit Assessment

This technique is considered appropriate at four stations where development is already established at high density, and is likely to be enhanced by transit development availability through higher achievable rents, lower vacancies, and/or improved sales per square foot. Boundaries for this special benefit assessment are tightly defined — relative to the dedicated property tax district discussed above — as the farther a property is located from a station the more difficult it is to link benefits directly. At a rate similar to the dedicated property tax, assessments would produce \$125,000 annually from each station or a total of \$500,000. (See Exhibit B.9).

Service Charges

Service charges or connector fees tend to be highly site specific and are frequently based upon negotiations with surrounding property owners. Fees are (or should be) predicated on ability to pay, and desirably bear a direct relation to actual increases in value registered in surrounding land and improvements. These considerations generally call for imposing a service charge on already developed properties or (in the case of new construction) well-established property owners.

The following example illustrates the financing potential of a service charge applied at 2 station areas and suggests annual revenues on the order of \$500,000. (See Exhibit B.11).

Long Term Land Lease (Air Rights) ^{1/}

To dimension the financing potentials associated with long term land leasing over transit air rights, the prototypical office building is taken up again. The

1/ Similar analysis to that presented in this section could be applied to other analogous techniques (e.g. sale of air rights property, or lease or sale of supplemental property).

ANNUAL FINANCING POTENTIALS
SPECIAL BENEFIT ASSESSMENT
PROTOTYPICAL TRANSIT IMPACT AREA

A. Land area of special assessment district <u>1/</u>	125 acres
B. Market value of real property in district <u>2/</u>	\$250,000,000
C. Assessed value at 50% of market value	\$125,000,000
D. Special benefit assessment rate at 10¢ per assessed \$100	.001
E. Annual Financing Potentials (Cx Dx 4 = \$125,000 x 4 station areas)	\$ 500,000

Note: Even in densely developed areas of a city, only a portion of the land contains tax-paying private improvements. For land use in selected U.S. cities, see Exhibit B.10.

- 1/ Includes area within 1/4 mile radius of a given transit station. The area of a circle within this radius is approximately 125 acres. At 3 acres per city block, the district would encompass some forty blocks, or a six-by-six block area. Thus, the extremity of the district would be three blocks from the station.
- 2/ Reflects an average market value of \$2 million per acre or an average of \$46 per square foot for land and improvements for entire district including streets, parks, and so forth. This is substantially higher than the \$625,000 per acre implied in the previous analysis, since special benefit assessment would be applied to downtown areas which are already developed, and hence have relatively higher average property values.

Source: Gladstone Associates.

BACK-UP TO EXHIBIT B.9
LAND USE BY TYPE
IN 106 LARGE U.S. CITIES

<u>Type of Land Use</u>	<u>Percent of Total Land Area</u>	
	<u>Cities of 100,000+</u>	<u>Cities of 250,000+</u>
Public Streets	17.5	18.3
Privately Owned		
Residential	31.6	32.3
Commercial	4.1	4.4
Industrial	4.7	5.4
Railroads	1.7	2.4
Undeveloped	<u>22.3</u>	<u>12.5</u>
Subtotal	67.4	64.7
Public, Semi-Public		
Recreational Areas	4.9	5.3
Schools and Colleges	2.3	1.8
Airports	2.0	2.5
Cemeteries	1.0	1.1
Public Housing	0.5	0.4
Other (by Subtraction)	<u>3.0</u>	<u>5.1</u>
Subtotal	13.7	16.2
Total	100.0	100.0

Source: National Commission on Urban Problems; Land Use in 106 Large Cities, Research Report No. 12, 1968.

ANNUAL FINANCING POTENTIALS
STATION STOP SERVICE CHARGE 1/
PROTOTYPICAL TRANSIT IMPACT AREA

A. Number of office buildings immediately adjoining station:	4
B. Average size of each building	150,000 s.f.
C. Total office space adjoining station	500,000 s.f.
D. Service charge 2/	50¢ per s.f.
E. Total revenue for one station (CxD)	\$250,000
F. Total revenue for two stations (Ex2)	\$500,000

1/ Structured as a continuing charge; alternatively could be established as a one-time, lump-sum payment for connector fee.

2/ Corresponds to a 5 percent increase in existing rent, of \$10 per s.f. in this case.

Source: Gladstone Associates.

project is a 230,000 sq.ft. office structure on air rights above a station stop; the economics of this project are those portrayed in this initial pro-forma of this appendix (see Exhibit B.3).

For present purposes, this initial analysis is taken several steps further to determine the funds available, should this project be developed for a long term lease of air rights. In principle, a developer in this case would be willing to pay \$160,000 annually for leasing land (or about \$6.95 per sq.ft., using the 23,000 sq.ft. site area previously stipulated). (See Exhibit B.11). Annual financing potentials, in turn, will depend on costs incurred by the entity (e.g. for added land acquisition, footings and foundations to permit air rights development, administrative and legal expenses for negotiating the lease). Such costs should be subtracted from lease proceeds, in calculating financing potentials.

As a second step (see Exhibit B.13) illustrative revenues from overages were estimated, under somewhat different conditions, assuming that lower levels in the building were programmed for retail, rather than office, uses. Such shops, particularly in heavily trafficked areas around transit stations, usually command significantly higher base rents than for office. As shown, the annual payment would increase both by reason of higher base rents and possible overages for retail, relative to the previous example to realize overages, of course, a percentage lease would need to be structured between the transit or development entity and its retail tenants. For example, if retail space were provided in lower levels of the previous described project, overage provisions could result in increased rental payments to the lessor, in this case the transit or development entity.

Exhibit B.12 FUNDS AVAILABLE FOR AIR RIGHTS LEASE
PROTOTYPICAL OFFICE BUILDING
(230,000 gross square feet)

1. Equity Requirement

A. Estimated Improvement Cost	\$ 9,940,000
B. Mortgage Proceeds	\$ 9,000,000
C. Required Equity	\$ 940,000
D. Cash Flow Required to Achieve 15% Return on Equity	\$ 140,000

2. Funds Available for Lease Payment

A. Funds after Debt Service	\$ 300,000
B. Return on Equity at 15%	\$ 140,000
C. Funds Available for Air Rights Lease 1/	\$ 160,000

Note: This project is identical to the office development portrayed previously by (Exhibit B.3) except that it is constructed on air rights.

1/ With a 23,000 s.f. site, a developer would be willing to pay us to \$6.95 per s.f. ($\$160,000 \div 23,000$) for an air rights lease. At a 9 percent lease rate this implies a land value of \$77/s.f. At 7 percent, the land value would be \$99.

Source: Gladstone Associates.

Estimated Initial Retail Sales

Total sales at 200/s.f. <u>1/</u>	\$4,000,000
Base rent @\$12/s.f. <u>2/</u>	\$ 240,000

Potential Overages in 5 Years

Total sales at \$280/s.f. <u>3/</u>	\$5,600,000
Rent at 6% of Sales Volume	\$ 336,000
Base Rent @\$12/s.f.	\$ 240,000
Overages	\$ 96,000
Added land lease payment at 50% of overages <u>4/</u>	\$ 48,000
Per square foot	\$ 2.40

1/ Floor area of 20,000 square feet is leased for retail use on lower levels.

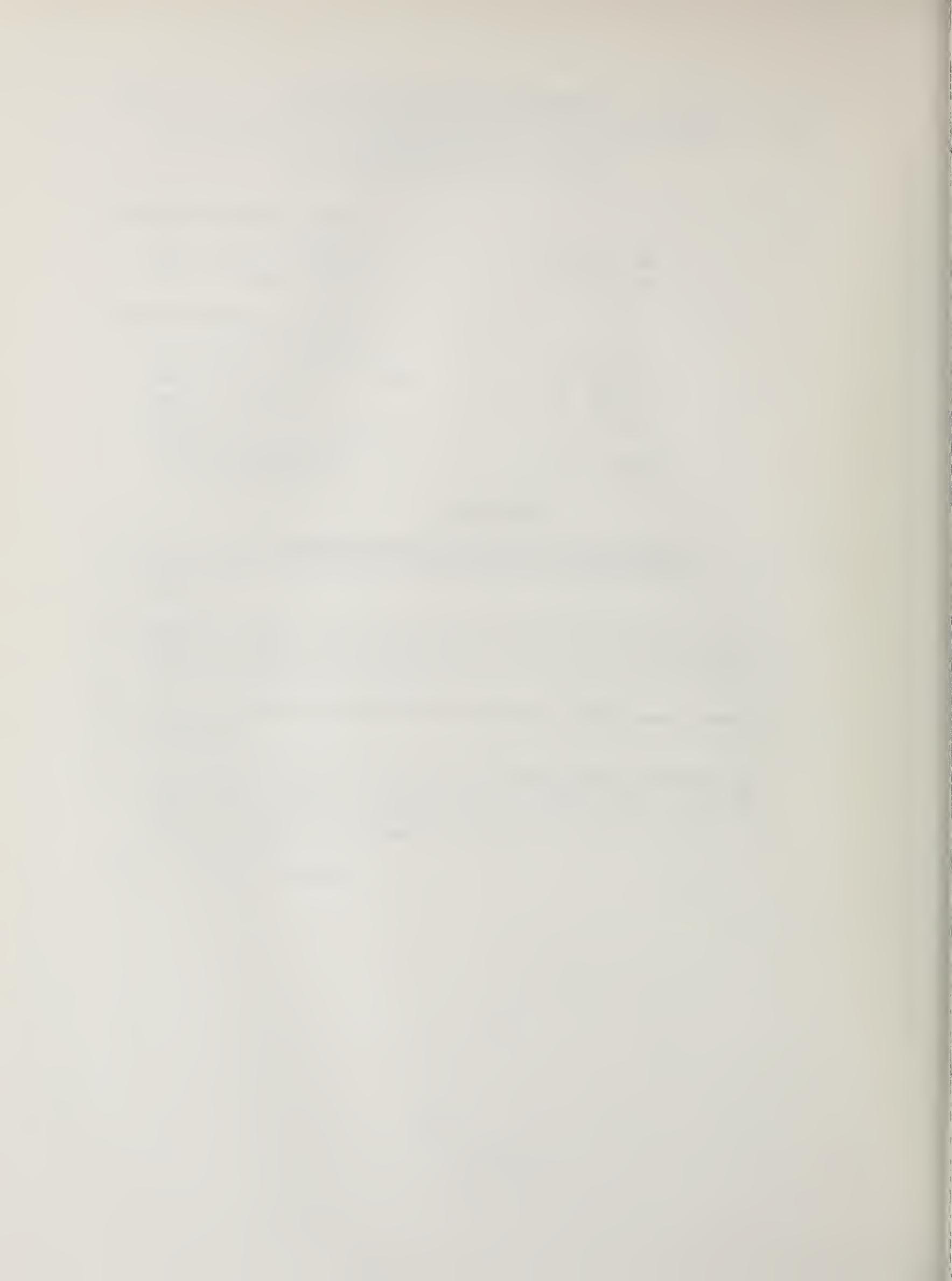
2/ Assumes a rental rate of \$12/s.f. and overages calculated at 6% of volume. In this case the retail space is just short of producing overage rentals above the base rent.

3/ Assumes 8 percent growth in sales, including both inflation and gains in productivity.

4/ A portion of overages are returned to the equity portion and a portion to the lessor. Typically, this percentage, assumed above at 50-50%, would be negotiated as part of the lease between a transit or development entity and a private developer.

Source: Gladstone Associates.

APPENDIX C
INVENTORY OF INVESTMENT INCENTIVES



INVENTORY OF INVESTMENT INCENTIVES

Particularly during the past World War II period, a diversified array of incentives have been employed across the country to encourage private investment in blighted areas, to provide low and moderate income housing, to strengthen central city economies, and to realize related public objectives such as transit area joint development. The purpose of this appendix is to provide a brief background about these tools and to list the most promising methods of public assistance, all of which depend upon applicable state and local law.

The term "investment incentive," as used throughout this catalog, is broadly defined to encompass all forms of public assistance that serve to increase the likelihood of private sector investments (e.g. by increasing profitability and/or reducing the risks of development projects). Of special interest here are state and local government programs, institutions and financing techniques that serve to facilitate private development for desired public objectives.

Thus defined, incentives extend across the entire development process, from planning, land assembly and financing and through construction, marketing and property management. Likewise, incentives may take many forms, ranging from direct assistance to developers (e.g. through public acquisition of property by eminent domain, and subsequent disposition to a private developer with land-cost-write-downs), to provision of public improvements (e.g. a transit station stop or pedestrian mall), to measures such as cutting red tape and construction time, so as to reduce uncertainties regarding costs and revenues during development and early years of a project's operation. Given this broad definition, most of the innovative financing techniques treated earlier in this catalog can function as investment incentives by positively affecting a developer's "bottom line" (e.g. in terms of cash flow, leverage or tax consequences). The degree of an incentive (if any), of course, depends upon the economics of a given project, and how these economics are affected by the specific tool in question.

Historical Perspective

Urban renewal projects provide perhaps the best known and publicized examples of investment incentives aimed at promoting private development for designated public purposes. Particularly under the federal urban renewal program, first legislated in 1949, but also under several innovative state programs ^{1/} local governments (or their semi-autonomous renewal authorities) sought to combine public powers with the private purse. Typically, public activities concentrated on planning and land assembly, with project financing, construction and management left to the private sector.

During the past decade, however, a number of more complex tools and sophisticated "public private partnerships" have been devised, with public sector participation extending to every phase of development, in some cases including construction and property management. As a result, some entrepreneurial local governments are emerging as fuller partners in development projects, by adopting more business-like behavior and seeking a direct share of the risks and rewards in certain development projects. Typically, this new mode means much earlier "deal-making" between public and private sectors, relative to the conventional urban renewal process (where developers often didn't become involved until the land disposition phase).

Even more recently, some states and localities have taken initiatives to promote urban economic development. This relatively new interest and activity, extending beyond the typical scope of previous urban renewal efforts, seems partly due to the recent economic recession at the national level which accentuated urban fiscal problems and attendant issues of job and business development at the local level. As well, local economic development practitioners were finding that traditional approaches — such as public works projects and social service programs — were frequently not adequate to cope with chronic urban problems.

^{1/} Many present day investment incentives at the state and local level are patterned after Missouri's Urban Redevelopment Corporation ("Chapter 353") Law, which offered delegated eminent domain and tax abatement to private corporations undertaking development in city areas designated as blighted. California's 1952 Community Redevelopment Law, which established tax increment financing (known in California as "tax allocation financing"), is another example of an early state program which was subsequently enacted in other jurisdictions.

Accordingly, both urban renewal and economic development specialists are experimenting with new powers, institutions and financing techniques to better serve such public purposes as central city revitalization, tax base growth and job development. These new tools, along with more established forms of public assistance, are outlined below in this Appendix. Taken together, they have improved the capacity of local governments to combine and "package" various local, state and federal funding sources so as to meet the needs of private investors.

Despite this extensive experience -- especially since the advent of federally sponsored urban renewal, now almost three decades distant -- relatively little has been documented about the range of available incentives, which is far greater than generally known. Few professional groups have sought to document (much less advance) the state-of-the-art, and case studies (much less evaluations) of prominent projects are the exception rather than the rule. Under the federal urban renewal program alone, for example, some 2,500 projects were initiated, only a handful of which were ever evaluated in publically available documents.

Thus, the literature on these investment incentives is limited. For example, despite a diligent search for a recent HUD study,^{1/} not a single published report could be found in the urban renewal and related fields that detailed the full range of incentives that state and local government can use and the specific potential of each to attract private investment, in terms of cash flow, leverage, tax consequences, and other considerations (e.g. cutting red tape and saving time). Historically, one result is that relatively few types of incentives have been tried. In most publicly-assisted redevelopment, for instance, land-cost-write-downs (and

^{1/} See, Gladstone Associates, Redevelopment, Rehabilitation and Conservation a Compendium and Annotated Bibliography (prepared for U.S. Department of Housing and Urban Development: October 1975). This survey and assessment of development incentives covered: 1) redevelopment (ranging from "conventional renewal" to innovative state programs such as tax increment financing and promising partnerships between public and private sectors at the local level); 2) rehabilitation (e.g. financing aids, property tax incentives and urban homesteading); 3) conservation (e.g. code enforcement and historic preservation programs). Volume I contains a summary of key literature and critical essays on the three major approaches and promising techniques in each category. Volume II contains annotations of over 400 documents of directly relevant nature, and Volume III lists the total of approximately 700 pieces of literature that were reviewed.

in selected states, tax abatement and tax increment financing) have been the major tools, despite the promise of other more innovative incentives. This picture is now changing however, as states and localities experiment with new initiatives to promote city rebuilding and urban economic development.

Cost-Effectiveness Analysis

In this connection it should be stressed that active public assistance for "bricks and mortar" projects need not necessarily mean massive government outlays. A number of tools are available to attract private investment, and several (e.g. incentive zoning, land leasing and, where state laws allow, direct loans, guarantees or interest subsidies to developers) are typically cost-effective.

Many development incentives, in fact, can be explicitly tested, and ranked through cost-effectiveness analysis, so as to permit selection of the incentive most effective in attracting private investment at lowest public sector cost. Such analysis could use standard pro forma analysis,^{1/} so as to determine "cost" to the public sector (e.g. under tax abatement, the revenues forgiven) and "effectiveness" in attracting private developer (e.g. greater cash flow, leverage and/or tax consequences, relative to the proposed project without public assistance). Although such cost-effectiveness analysis is infrequently employed, it could contribute substantially to selecting appropriate development incentives from the full range (i.e. traditional tools to more innovative methods), and thereby increasing the effectiveness of public assistance.

Alternative Forms of Public Assistance

A number of methods may be used by the public sector -- mainly state and local government -- to affect the type, timing and scale of private investment in

1/ An illustration of pro forma financial analysis, applied to incentive zoning for a 230,000 gross square foot office structure, is presented in the previous appendix. Alternatively, DCF (discounted cash flow) analysis could be employed to the same end, if greater detail and accuracy are desired.

redevelopment, rehabilitation and conservation projects.^{1/} A focus in the following materials is upon incentives for redevelopment, which normally entails relatively large-scale real estate projects. Some such projects comprise commercial, residential or mixed use development in downtown areas; others involve transit facilities; still others include public improvements ranging from transit malls and parking ramps to convention centers.

For purposes here, these methods are grouped into categories which generally correspond with the development process: 1) Planning, 2) Land Assembly, 3) Financing, 4) Provision of Project Improvement and Public Facilities, 5) Incentives to Private Developers, 6) Construction, 7) Marketing, 8) Property Management and 9) Alternative Organizational Arrangements.

While all these methods may provide some degree of incentive to private developers, we have reserved the term "development incentive" for the fourth major category of tools, since they typically affect a private developer's investment most directly, by changing cash flow, leverage or tax consequences.

Public Planning

Covered here are types of plans typically prepared for redevelopment projects, including:

- Policies Plan: sets forth broad community objectives (e.g. controlled growth, rehabilitation of residential neighborhoods) and a set of policies designed to move toward those objectives.
- Generalized Land Use Plan: maps out permitted land uses, preferred location for private development, and type of project improvements and public facilities that are needed. (Many GNRP's - General Neighborhood Renewal Plans, and NDP's - Neighborhood Development Programs, would fall in this category.)

^{1/} "Urban renewal" in the sense originally legislated, encompassed three types of projects, including redevelopment, rehabilitation and conservation.

- Urban Renewal Plan: indicates specific plans for property acquisition or rehabilitation, demolition, clearance and eventual land disposition for one or more projects. (Many plans for "conventional renewal" projects would fall in this category.)
- Capital Improvement Program: specific plans as per above, with investment programs for public and private resources needed to realize redevelopment over a multi-year period. (Some CRP's - Community Renewal Programs would fall into this category.)
- Project Development Program: sets forth above, together with a site-specific development program (i.e. type, scale, and timing of feasible uses for one or more redevelopment projects), building bulk and height limitations, location and timing of public capital improvements, architectural features, and so on.

For purposes of analysis, these plans can be grouped into two broad categories: comprehensive planning and project planning. The former, whether a "policies plan," a "generalized land use plan" or some other name, usually provides some assurance to private investors that complementary development will take place around the project, that transportation and parking requirements will be attended to, that essential public services (e.g. water and sewer, police and fire) will be provided and so forth. The latter, project planning, can vary considerably as to emphasis and detail, as indicated by the information contained under the "urban renewal plan," "capital improvement program" and "project development program" set forth above. Current thinking in many local areas, though, calls for engaging private developers at an early stage (so as to draw upon private sector economic and entrepreneurial expertise), to relax the rigidity of some planning standards (relative, say, to urban renewal requirements)^{1/} in order to accomodate changing market and financial conditions over time, and to obviate the need for costly and time consuming development reviews at each stage in the project's early years.^{2/}

- 1/ For example, by reducing the specificity of development standards governing such factors as parking requirements, open space provisions, FAR, or architectural treatment.
- 2/ For example, by modifying land take-down schedules to permit developer(s) to adapt to changing market or financial conditions and/or by granting greater flexibility to the developer in programming reuses that can adapt to changing market conditions.

Land Assembly

A number of techniques have been used to assemble properties for subsequent development by the private sector. These include:

- Quick Take (i.e. public acquisition to title immediately upon commencement of eminent domain proceedings).
- Staged Acquisition (i.e. public acquisition to title using eminent domain, but gradually as development progresses instead of all at once).
- Negotiated Purchase (i.e. purchase in fee simple by a public agency, but with the use of eminent domain to encourage compliance).
- Acquisition at Less than Fee (e.g. as in purchase of easements and development rights, or through long-term land leasing).
- Public Assisted Private Assembly (e.g. as in "delegated eminent domain," whereby eminent domain powers are exercised by a private developer with appropriate safeguards against misuse).
- Unassisted Private Assembly (e.g. private party agrees to cooperate with a public redevelopment plan by acquiring and developing a particular parcel).

Land assembly by a transit or development entity and subsequent lease or sale of air rights has been often employed for joint development projects, as seen above in this catalog. Some local governments have even turned to air rights transfers as a means of providing an incentive to private developers, while maintaining public control and use of land at or below ground level. ^{1/}

1/ As an added incentive to private developers, a local transit or development entity can also develop the land to complement private facilities built on air rights (e.g. through a public parking garage below ground). In addition, lease payments and property taxes on the air space and improvements can be calculated to provide an incentive to the developer, and also to provide the entity with a share of the lessee's profits (e.g. through a percentage lease, escalator clause or reappraisal clause).

Other forms of land assembly, usually less frequently utilized, include: 1) "equity exchange" (e.g. contribution of land to a common pool, in return for shares in a public development corporation, which converts the property into contemporary land uses), 2) land value taxation or a graded tax to bring "underutilized" land into redevelopment, and 3) "land swaps," a relatively inexpensive way of overcoming legal restrictions on local use of eminent domain, along with problems associated with fragmented land parcels (e.g. by swapping land between public and private land, based on values set by an independent appraiser, so as to give each a consolidated and usable land parcel).

Project Financing

Financing covers myriad arrangements affecting costs and revenues of a project. Among the more commonly used public finance techniques for large scale development projects are the 12 discussed in the main body of this catalog, often employed in combination with bonding.

In addition to, or in lieu of these techniques, cost sharing and resource pooling arrangements are being used in many development projects involving public and private sectors. Pooling financial and other resources (e.g. in kind, contributions) can serve a means to amass the capital necessary for undertaking a development project. Most commonly, pooling is designed to leverage other loan, grant or equity funds, particularly from federal and state governments.^{1/}

A related form of financing, for somewhat different purposes, concerns cost sharing arrangements. These arrangements are a common feature of many public/private projects, and represent a pragmatic approach to sharing costs which neither partner can afford or feels justified to bear alone. Such costs can range from fees charged by architectural planning or other consultants to outlays for infrastructure which is partly government, partly private in nature.

1/ Two instances might be cited here. The first involves using private funds to leverage other financing assistance, where a "matching requirement" is called for. For instance, private investment in parking garages and city government pledges were often used to provide the matching requirement under HUD's urban renewal program.

As another example, various sources of public development capital available to economically depressed urban municipalities can be combined, or "packaged" with private business assistance funds. Examples of municipal development funds include community development block grants, EDA programs (public works, economic planning, technical assistance and Title IX grants) and CETA Manpower grants. Public sources of business development funds include EDA business development loans, SPA programs (business loans, loan guarantees, local development company loans) and OMBE grants.

Project Improvements, Public Facilities

To attract private investment in specific neighborhoods or designated districts, the public sector frequently provides a range of improvements either adjacent to, or on the project site. These can include:

- Provision of major project improvements (e.g. construction of transit systems, highways, and/or street alignments, provision of a transit stop, construction of storm and sanitary sewers, installation of utilities).
- Provision of major public facilities (e.g. schools, parking, civic center, government office buildings, hospitals, neighborhood centers).
- Provision of public amenities (e.g. outdoor recreational facilities, pedestrian malls, open space, plazas, landscaping).

In some cases, certain types of project improvements, (e.g. parking) are more amenable to public financing than other portions. Also, and as noted earlier, public financing of portions of a project can be designed to lever other loans, grants or equity funds, particularly from state or federal governments.

Incentives to Private Developers

Once land is assembled, a range of incentives can be employed to encourage private developers, typically by increasing their return on real estate investment. These development incentives can include:

- Land-Cost-Write-Downs: land is sold to developer(s) at less than cost of purchasing and clearing parcel for redevelopment, thus reducing total development cost.
- Tax Abatement: reduction in real estate taxes is negotiated or permitted by statute (e.g. Missouri's #353 legislation), thus reducing developer(s) expenses and cash flow.
- Tax Increment Financing: project improvements are paid for by state or local government issues — secured by reserving increased tax revenues from the new development -- thus reducing total development costs.
- Long-Term Land Leasing: land is leased to developer on an unsubordinated basis thus decreasing total development costs, increasing leverage, providing favorable tax consequences but reducing cash flow.

- Subordinated Land Lease: land lease to developer on a subordinated basis, thus greatly increasing leverage, providing favorable tax consequences, but reducing cash flow.
- Loans or Loan Guarantees: loans or guarantees are extended to developer thereby increasing leverage.
- Zoning Incentives: special zoning treatment (e.g. density bonus) increases return and/or reduces risk associated wth private development.

As noted in the above, these development incentives normally provide more favorable cash flow, leverage and/or tax consequences to the developer, relative to what would have been the case without public assistance. Accordingly, cost-effectiveness analysis can be employed (as suggested above), so as to permit selection of the most effective type of incentive at lowest public sector cost.

Construction

Collaboration on construction can take place in a variety of ways. In some cases, cities have actually constructed public/private projects. The Gallery in Philadelphia is case in point, where the Philadelphia Redevelopment Authority served as general contractor for the project. Another is the City of Minneapolis, which used its public works resources to construct the Nicollet Mall, when the project was about to be abandoned because of the lack of acceptable bids by private general contractors.

Most local public sector assistance in the construction area, however, comes with respect to facilitating or speeding up the process, rather than direct construction per se. In many projects these days, avoiding construction delays is an overriding concern of both the public and private sector investors in projects. Accordingly, a considerable emphasis can be placed on procedures to cut delays, or at a minimum, to better manage the construction process. Illustratively, these methods include:

- Creation of a "one stop" clearance center so that the developer(s) can relate to a single agency in securing project approvals.
- Establishing mutually agreed-upon deadlines for commencement of construction (e.g. finalization of all plans and agreements within, say, 4 months, after which either party can withdraw from the project).

- Employing the "fast track" method, which allows construction work to commence before all final plans, working drawings and documents have been completed or executed.
- Assurance of city support with respect to such factors as temporary street closing needed to facilitate construction, prompt issuance of needed permits, assistance in meeting any special local regulations, etc.

Other methods may entail hiring a joint construction manager for both public and private portions of a project, use of computers to schedule and coordinate construction, and so forth.

One related concern is often to minimize disruption caused by construction. Collaborative efforts by local business organizations and city governments can minimize this problem, for example, by scheduling construction so as to interfere as little as possible with existing business activities, and by devising joint promotional activities to offset anticipated declines in business activities throughout the construction period.

Marketing

The marketing of a development project may be a controversial matter, particularly in latter stages of a project. During initial planning, local business persons can assume responsibility for presenting a project to the City Council and electorate. Also, local business organizations can play a strong role in attracting private companies to invest in joint projects by providing assistance in securing financing and by locating tenants and/or equity partners. A more controversial aspect of marketing, however, hinges on whether city governments or local business people should compete with professional realtors in attempting to lease space in public-private projects. Often, an intermediate solution is simply for public entities to refer interested parties to the project's developer, rather than taking a more active role.

Property Management

Property management responsibilities can be shared in several ways. On the one hand, as shown by transit access agreements negotiated between Rockefeller Center and the New York transit entity, a private party can substantially manage

large portions of a public project, in this case transit station stops and adjacent areas. In other instances, (e.g. Nicollet Mall) operating costs and responsibilities are jointly borne by the city government and mall property owners. Under this arrangement the City devises an annual maintenance budget, which is approved or modified by owners. The Committee, in turn, is an extension of the special benefit assessment scheme which was established earlier to pay for the mall's capital costs (see Feature Box, Chapter 6). The City pays the amount it would have normally spent on maintenance if Nicollet Mall were a regular street, and benefited property owners share the remainder of costs according to a plan for spreading the original assessment.

Alternate Organizational Arrangements

Finally, a variety of organization arrangements may be structured, so as to explicitly encourage private investment in redevelopment, rehabilitation or conservation projects. Historically, the most important such entities and their attributes have been:

- City Agencies (e.g. city department of community development): Direct access to city funds and ability to make grants; but subject to civil service constraints, political pressures, and applicable state and local laws, which may limit their ability to engage directly in real estate development.
- LPA's ("Local public agencies" a generic term referring to urban renewal authorities): Typically endowed with powers of eminent domain, authority to issue bonds, and undertake redevelopment of blighted areas; but may lack political accountability and ability to operate outside of areas designated as "blighted."
- Quasi-Public Entities (usually considered legally as private non-profit corporations, as distinct from municipal corporations): Typically enjoy administrative autonomy combined with some degree of political accountability, access to important development powers typically prohibited to municipalities, and some tax advantages; but may lack political accountability to the extent of city agencies.
- Private Redevelopment Corporations (typically limited dividend private developers registered under special state enabling legislation — e.g. Missouri's Chapter 353 or Ohio's Impacted Cities Act): Can be endowed with delegated eminent domain powers, may be granted tax abatement and/or long term leases of municipally owned land or property; but may lack political accountability.

- Private Redevelopment Organizations (notably, the so-called "urban businessmen's improvement organization"): Ability to mobilize public (and particularly private) resources, and play "catalytic" role in initiating projects; however, limited long-term financing and implementation capabilities, and may lack political accountability.

In addition to the above, a number of other, transit-related options (e.g. a transit corridor development corporation) have been proposed recently, all essentially variants of the aforementioned possibilities, but with a specific focus on transit.

An increasingly popular institution, among the organization types outlined above is the quasi-public entity, which frequently takes the form of city-wide economic development corporations (EDC's). These entities are usually governed by a mixed public/private board of directors, and are staffed by full time professionals, paid for by public/private funding. They operate on a non-profit basis, generally under contract to the city, but may also enter into profit-making ventures with private developers. Any resulting profits may then be rechanneled into the entities capital revolving fund for future development activities. These entities can also benefit from their special legal status as private bodies. Since they are not considered to be municipal corporations undr most state constitutions, these entities provide an alternative to city governments which would otherwise be prohibited from directly entering into certain types of development projects.

An early example of such entities, as well as more recent instances, are set forth in the accompanying feature boxes. As shown, the geographic scope, powers and direct involvement in development of these entities is greatly enlarged, relative to traditional city agencies and "LPA's" of the urban renewal era.

BALTIMORE'S CC-IHM INC.

CHARLES CENTER — INNER HARBOR MANAGEMENT, INC.

Charles Center-Inner Harbor Management, Inc., is a private, non-profit, non-stock corporation formed to provide the city of Baltimore with management services for the downtown redevelopment process. Charles Center, the Inner Harbor projects, and the Metrocenter program are enterprises of the city of Baltimore. Though many municipal agencies are involved, primary responsibility rests with the Department of Housing and Community Development. This agency, in turn, is represented by Charles Center-Inner Harbor Management, Inc., which provides executive management and technical services under a contract with the city.

CC-IHM Inc. was formed in 1965. Its predecessor, the Charles Center Management Office, was organized in 1959 and given two primary responsibilities:

- Coordinating the activities of all other groups and agencies in the execution of the Charles Center Project; and
- Representing the Baltimore Urban Renewal and Housing Agency and the city in the disposition of project land to suitable developers.

Other responsibilities of this group included most of the relocation, site management work, and supervision of special consultants.

Organized along the same principles, though with somewhat expanded responsibilities, CC-IHM was formed in 1965 and replaced the Charles Center Management Office. CC-IHM conducts all negotiations and competitive offerings for disposition of project land, supervises design and construction of public facilities, and coordinates activities of various city agencies and private developers. The corporation serves as liaison between the city and private business interests to expedite completion of renewal projects. This arrangement, in turn, has proven a pivotal factor contributing to the city's success in attracting substantial developers, private capital, and marshaling these resources to achieve city objectives.

As the city's agent in dealing with prospective developers, CC-IHM, Inc. is guided by a land disposition policy established by the Department of Housing and Community Development. This policy is designed to achieve the city's goals in each downtown redevelopment project while simultaneously enhancing the value of private development in the area.

Developers are selected on the basis of their ability to offer the highest possible quality of development, greatest increase in tax revenues, and highest price for the cleared land consistent with the first two objectives. The normal method of choosing private developers is by open competition based on specific criteria. However, this process can be

altered if one developer offers a substantial benefit to the city which is not available from any other developer. After selection, the developer and CC-IHM, Inc., negotiate terms of a disposition agreement establishing the purchase price of the land and obligating the developer to meet objectives and requirements of the renewal plan.

CC-IHM, Inc. operates on an annual contract with the city and is relatively free to carry out management decisions and implement the policies of the city regarding downtown renewal. This approach circumvents, to some extent, detailed public agency procedures found in most other urban renewal projects. More important, it creates a catalytic agent between the public agency and the developer — an agent of the city who can also, when circumstances indicate, represent the developer in dealing with the hazards implicit in all local government situations. Substantial completion of Charles Center 15 years after the plan was first proposed — a relatively short period compared to other urban renewal programs — demonstrates the value of this semi-private approach in expediting the public renewal process.

Source: Robert Witherspoon, Jon P. Abbott and Robert Gladstone, Mixed Use Developments: New Ways of Land Use (Urban Land Institute: 1976), p.147.

DAYTON CITY WIDE DEVELOPMENT CORP.

First organized in 1972 as a quasi-public corporation, Dayton City-wide Development Corp. (DCWDC) already has begun to attain national prominence for its innovative use of legal and financial tools to promote economic and community development. Many of these techniques involve direct risk-sharing with the private sector and represent a degree of quasi-government participation in the development process which is still relatively unusual in the United States.

This type of participation, which included equity investment, general partnerships and subordinated leasing arrangements, goes beyond the more traditional role of development "broker" usually associated with local public and quasi-public economic development agencies. Although DCWDC can "package" indirect developer incentives such as property tax abatements and industrial revenue bonds, it also has been involved in more direct legal and financial risk-sharing with private developers.

DCWDC also has been successful in relating its community-wide development goals to neighborhood needs and priorities and has institutionalized neighborhood participation into its project selection and review process. This practice has evolved over several years and can be traced to the de facto veto power which the city commission gave to several Neighborhood Priority Boards in 1970 when it appropriated local funds for a "Neighborhood Grants Program."

Six boards now elected by local-area residents suggest and approve projects to be funded by outlays from "Neighborhood Trust Funds" managed by DCWDC. Although this type of coordination may not be as unusual as DCWDC's innovations in risk-sharing, still it demonstrates a high degree of political sophistication on the part of both city hall and DCWDC.

Organization and Powers

DCWDC was chartered in September, 1972, as a private, nonprofit corporation eligible for IRS designation under IRS code 501 (C) (4). This designation entitles DCWDC to receive Federal tax exemptions on business income but not to pass on personal income tax deductions on individual gifts it receives. As a quasi-public corporation, its 28-member governing board is accountable to the city commission which approves appointments to the board and annually renews DCWDC's contract agreement.

DCWDC combines many features of an administratively-autonomous organization with a degree of local accountability associated with its role as city "project manager" for housing and economic development.

Board Appointments

Twenty-two of the 28-member board of trustees of DCWDC were appointed originally by the city commission and are divided equally among

representatives of (1) government agencies, (2) financial and business sectors and (3) the community. Each of the remaining six board members is appointed annually by the respective Neighborhood Priority Boards.

Following initial two-year appointments by the commission, a trustee membership committee approved by the initial board was delegated authority to make nominations to the commission on an annual basis and assign three-year staggered terms of office to the 22 board members.

Staffing Pattern

Except for an appointed executive director, DCWDC's personnel is recruited on a non-political basis by the executive director. Original staffing consisted of a secretary and three full-time professionals: the executive director, the assistant director and a development analyst. Both directors are former civil servants with backgrounds in city planning and economics.

In 1975, the professional staff doubled in size between April and September and now totals six professionals and two secretaries. New additions include a consumer loan specialist with considerable business experience; an urban homesteading sales promotion manager, formerly a licensed real estate salesman; and an ex-construction contractor, who currently acts as construction manager for the homesteading rehabilitation undertaken by DCWDC.

Funding Sources

DCWDC's primary source of capital and administrative funds is its annual contract with the City of Dayton, in which DCWDC legally is "reimbursed" for performing "management services." Actually, the contract involves capital grants appropriated by the city and placed under DCWDC's management as the city's agent in making development loans and investments. Officially, DCWDC-managed funds remain the property of the city until spent; thereafter they become DCWDC property.

Capital Grants

Initial capitalization for DCWDC came from two city appropriations, \$2.5 million funded out of the city's HUD Planned Variations grant and \$1.25 million from General Revenue Sharing sources. These two appropriations were critical in providing DCWDC with the flexibility necessary to fund start-up costs, including administrative expenses. Planned Variations funds were used to pay salaries and normal office expenses that could not be covered by business income for the first few years of operation.

Planned Variations monies also were flexible functionally and permitted funding for economic development and mixed-use projects as well as housing construction. Half of these funds was allocated by the

commission to a "citywide" account managed solely by DCWDC, with the remainder divided among the four "neighborhood trust" accounts on the basis of relative population, unemployment and per capita income levels within each Neighborhood Priority Board area.

Technical Assistance

In 1974, the first full year of DCWDC's operations, start-up costs were assisted further by a \$57,000 technical assistance grant from EDA. However, most of this year's costs were supported by the initial Planned Variations and General Revenue Sharing grants. During calendar year 1975, CDBG grants became the major source of funds.

CDBG funds were designated to fund two minority business development grants, totaling \$300,000, (half of which was designated for use by Dayton's Model Cities area residents), to capitalize a home improvement revolving fund of \$825,000, to fund special urban homesteading rehabilitation at \$1.1 million.

Under this program, DCWDC directly purchases low-cost foreclosed homes from FHA, rehabilitates the house and re-sells them recovering its direct costs and some administrative expenses. Properties are sold at 85 percent of their market value.

Administrative Costs

Private-sector contributions never have been sought to fund any of DCWDC's operating costs, since these are covered either by contracts with the City of Dayton or by earnings from investments. (Private capital, however, has been used in development projects and DCWDC has participated directly in joint equity ventures with local investors.)

Although DCWDC was incorporated legally in September, 1972, actually it did not set up its offices until March, 1973, and did not achieve full operations until well into the same year. Calendar year 1974 thus represented the first full year of operations; administrative expenses totaled \$189,600 for this period.

During calendar year 1975, the staff doubled and administrative expenses grew to \$290,000, including \$40,000 for a housing market study and \$28,000 for promotional costs of the "Urban Living" program, designed to attract middle-income families back to the city.

Legal Restrictions

Ohio state law specifically does not authorize public or quasi-public development corporations such as DCWDC. For that reason, DCWDC was incorporated under the general non-profit corporation statutes of the state. As such, it has no special authority to issue bonds, acquire property, etc.

The Ohio Impacted Cities Act of 1973 (Ohio Statute 1728) also allows cities to grant property tax abatements of up to 30 years on property

improvements. It must do so through "Community Urban Redevelopment Corporations" which acquire and maintain legal title to the property upon which abatement is granted.

Finally, Section 501(C)(4) of the IRS code prohibits DCWDC from distributing dividends to any of its shareholders. This rule does not hamper DCWDC significantly, since its equity does not represent private capital and since corporate earnings may be re-invested in new revolving fund assets.

The City of Dayton intended that DCWDC operate in a flexible way. For that reason, the city's contract allows it to utilize "... legal, organizational and development tools listed in this contract and any other techniques which can advance the stated purposes of this program."

Since the stated purposes of the work program include the promotion of private investment in the city "through the use of various legal and financial incentives," this has given DCWDC considerable flexibility in its development activities.

Investment Strategy

The range of legal and financial tools which DCWDC can and does employ reflects its "investments strategy" approach toward urban development. Basically, this approach implies a more direct and flexible use of public funds, deployed so as to maximize private/public capital leverage and to improve the benefit/cost ratios in terms of employment, personal income, fiscal impacts and other economic factors. In its own words, DCWDC views such a strategy as important for several reasons:

- "First, difficult projects sometimes require that combinations of subsidies be applied, as opposed to just a single subsidy;
- "Second, where this is done with skill, difficult projects can become not only feasible but profitable to the public as well as private sector; and
- "Third, the key is to develop formulas for sharing the risk between the private and public participants and to strive for the greatest degree of leverage possible."

Public/Private Coordination

Aside from its special legal and financial powers, DCWDC is also interesting for the way it has combined many of the attributes of a private entity with a good degree of local accountability.

For instance, it enjoys relative autonomy in such administrative matters as staff hiring and personnel standards, but still is accountable to the commission, which must approve its capital budget and a quarter of its board members each year. DCWDC is also responsive to locally-elected Neighborhood Priority Boards, which appoint six board members each year.

The project review process also illustrates how DCWDC coordinates with public and private sectors, including neighborhood groups. As noted earlier, half of DCWDC's original Planned Variations funds was allocated to a "citywide" fund and the other half to four "neighborhood" funds; with DCWDC retaining veto power over both funds.

Outlays from any of the "neighborhood" accounts require review by a nine-member Neighborhood Development Council, composed of neighborhood representatives with experience in finance, real estate and economic development. Neighborhood Development Councils are appointed by their respective Neighborhood Priority Boards and work directly with DCWDC staff in the preliminary stages of project review.

Source: National Council of Urban Economic Development "Citywide EDC's (July 1976), pp. 2-5.

MICHIGAN'S CITYWIDE ECONOMIC DEVELOPMENT CORPORATIONS

In 1974, Michigan enacted the Economic Development Corporation Act (PA 74-338) to authorize municipalities and counties to create non-profit citywide EDCs for the purpose of promoting commercial and industrial development. In addition to this broad functional scope, local EDCs in Michigan may contract directly with municipalities and/or with any federal or state government. This allows municipalities to act as "pass-through" agents for economic development loans and grants received from state and federal funding sources.

Only one EDC may be organized to operate within any given locality or county. Citywide EDCs may be organized within a previously designated county EDC area. In these cases, the county EDC is redefined to include the remainder of the county. In addition, different EDCs can also enter into cooperative agreements and joint projects with each other. For instance, a county EDC could develop projects jointly with a municipality, subject to city council approval.

Michigan EDCs can assist both industrial and commercial development. They can also engage in mixed-use and housing replacement projects. Most important, the Act allows EDCs to engage in any locally approved project which meets the general purposes of the Act. These purposes are generally stated to include any "necessary" means of assisting industrial and commercial development anywhere within the city. "Projects" may include land, plant and equipment which are "necessary, suitable or incidental to" commercial, industrial, or incidental residential use. This may include pollution abatement improvements.

In accordance with the public purposes of the Act, EDCs may:

- acquire, rehabilitate, improve, construct and maintain project land and properties.
- borrow money and issue revenue bonds and tax-exempt financing to cover project costs and any associated "necessary or incidental" expenses.
- enter into leases, lease purchase agreements, or installment sales contracts for the use or sale of projects.
- mortgage projects.
- sell and convey projects at a price determined by the EDC.
- lend, grant, transfer, or convey funds received from any municipality or other official public body.

- purchase land and property condemned by the city under the general purposes of the Act.
- receive tax exemptions on all EDC property holdings and earnings, subject to local approval.

EDCs in Michigan must have a Board of Directors appointed by the chief municipal officer, with the advice and consent of the local governing body. The Board must total at least nine members, with a minimum of three ex-officio directors appointed or employed directly by the municipality. The chief municipal executive officer and any local governing body member may also serve directly on the Board. Moreover, there must be at least two additional directors appointed to represent the neighborhood residents of any project area likely to be affected by a proposed project plan. Remaining directors may come from either the private or public sectors, and may include representatives of local business, labor, financial and real estate sectors, minority, neighborhood, and civic groups.

Terms of office shall be limited to six years except for initially staggered appointments. However, directors may be appointed to serve additional terms. Directors serve without salary, except for reimbursable expenses and modest per diem allowances.

Any municipality or local government agency may aid in EDC project planning and implementation, including the following financial aid arrangements:

- loans, grants, transfers, or contributions of funds to the EDC "in furtherance of its public purposes."
- contracts and other agreements of up to 50 years with the EDC.
- use of any municipal funds to purchase EDC bonds or financial obligations.
- loans, grants, and other transfers of state and federal funds channeled through the municipality to the EDC.

Any state agency or department may lend assistance to the municipality and its EDC and disburse funds to an EDC in accordance with the terms of any federal or private grant or contract. This latter provision allows Michigan EDCs to utilize flexible technical assistance and capital funding sources such as EDA's Title IX program and operational funding from the State Office of Economic Expansion. Already, two countywide EDCs (Benton and Muskegon) have entered into this type of arrangement with the Michigan Department of Commerce using Title IX funds, matched with state and local funds and contributions.

A new 1975 amendment (PA 175) also clarifies the statute's provisions regarding project eligibility for federal tax exemptions on EDC first-mortgage bonds and obligations. These changes are designed to avoid individual rulings from IRS on each tax exempt borrowing, and do not necessarily affect project eligibility for other types of EDC assistance. The amendment also provides for local government project approval by resolution instead of ordinance. (However, the EDC charter must be approved by ordinance following public hearings and review.)



8

APPENDIX D
THE TRANSIT-IMPACT-ON-LAND-USE LITERATURE

THE TRANSIT-IMPACT-ON-LAND-USE-LITERATURE

Broadly defined, the transit impacts which are treated in the literature cover changes in the amount and distribution of income, population, land use and property values within specified areas.^{1/} Numerous attempts have been made to identify these impacts at various levels of analysis. Three of these levels of analysis may be arbitrarily defined for purposes of the following: the first level covers the entire metropolitan region, the second comprehends local areas (e.g. the central city of a region) or large-scale communities (ranging from suburban subdivisions to new towns), and the third level covers smaller areas (e.g. within transportation corridors or around transit station stops). The closer one moves to the third level of analysis, the more that is known about urban transportation impacts.

Thus, the long term impacts of transit on regional development have proven difficult to pin down, although more has been learned about transit station impacts on immediately adjacent areas. Particularly for these smaller areas of analysis, changes in accessibility can contribute to large and lasting changes in the character of land use. A classic example has been the construction of major metropolitan lines in some of the larger North American cities, notably Toronto.^{2/} By offering

- 1/ Beyond the scope of this appendix are impacts such as reductions in air pollution and noise, energy conservation, etc.
- 2/ The degree of transit's impact on Toronto's development, and specifically the subway's effect on the downtown area, continues to be debated in the literature. Early reports (e.g. by Warren Heenan in the April 1968 Appraisal Journal) credited the Yonge Street Subway with most of the \$15 billion increase in assessed value along its 4.5 mile route, between 1954 and 1964. These conclusions, however, were based on limited analysis and were questioned by others (e.g. Carol Kovach in a 1974 paper presented to the ASCE/EIC/RTAC Joint Transportation Engineering Meeting in Montreal) who attributed most of such increases in property value along the Yonge Street line to general economic conditions. In addition, the Toronto subway system has been extended several times since this initial segment, a process which continues today, and several multivariate statistical studies have been completed in the last five years to assess the property value impacts of these extensions. For further discussion of this subject and references, see DeLeuw Cather and Company (Mr. Robert L. Knight and Ms. Lisa L. Trygg) "Land Use Impacts of Recent Major Rapid Transit Improvement #DOT-0S-60181-1 (Report prepared for the U.S. Department of Transportation, Office of the Secretary: 1977).

improved access these transit arterials have triggered intense development on adjacent land, which has become a magnet for an evergrowing array of commercial development, high-rise residential projects and related public facilities. Such changes, to be sure, usually need other necessary conditions (e.g. the conjuncture of visible market demand, access to capital, the availability of sufficiently large assembled tracts, and suitable zoning). But without improved access, changes in land use would have required a much longer time, or might not even have occurred at all.

Urban planners, of course, are not unaware of these effects. But such awareness is of little use without the ability to estimate the nature, magnitude and timing of these effects in the context of local conditions. In this connection, the literature contains little by way of predictive methodologies, that forecast accurately over time the socio-economic and land use effects associated with transit. ^{1/} Consequently, current attempts to identify and dimension transit impacts continue to rely on standard market research techniques, analysis of "comparables" and a considerable degree of judgment. Another major problem in estimating the nature of transit's effects is the lack of empirical evaluation on an ex post basis, which one could call retrospective evaluations. Several sizable transit systems and/or significant transit extension have been completed since the 1940's, and have continued to operate. They offer a large data base that could be used in studies to determine whether prior predictions were accurate, or could be used to develop a model for further evaluations. Improvements in these predictive

^{1/} A first step in this direction was taken by the federal government in early 1973 when the Council on Environmental Quality and several other federal agencies commissioned a major research project to document the socio-economic and land use effects associated with investments in transportation facilities and sewer systems. An integral part of this effort was to have been the development of a methodology for predicting such effects, based upon existing knowledge and selected case studies, although such predictive methodologies apparently were not produced. See, Urban Systems Research and Engineering study, cited later in this appendix.

tools would make a major contribution to the transportation planning process, where the land use and activity allocations still form the weakest link in the chain of forecasting assumptions made. Aside from its obvious utility in enabling better estimates of the demand for transportation (and other public services for that matter) such a methodology would serve to clarify the range of options available and facilitate evaluation of alternatives. These comments are even more applicable to the planning requirements for mass transit stations than for other transportation modes. Compared with highway interchanges, for example, transit station areas typically experience even more concentrated development pressures, although at levels which fall away faster as one moves away from the affected area.

True, a large literature exists in the transit field, but the bulk has been based on "ex ante" rather than "ex post" analysis. Examples include the transportation land use models, attempts to predict transit impacts for planning purposes and/or surveys of changing real estate values in areas served by transit -- all of which typically do not entail the use of significant control data. Since transit/land use relationships are complex, and "ex post" empirical evaluations so limited, the impacts of transit improvements on property values remain a vexing and amorphous area of analysis. Methods of analysis that would be useful to advance this state of the art would be "before and after" comparisons between study and control areas, trend analysis for affected areas, (especially with identification of relative stage of development), survey research of decisionmakers (e.g. investors, developers) affected by transit and so forth.

Transit Impact Studies

Apart from the variety of land use - transportation models which have been developed (the practical utility of which is very limited for planning purposes), astonishingly few studies have been carried out as to the impact of mass transit systems. This is particularly surprising since conventional economic evaluations of rapid transit systems are often unable to recommend the proposed investment on the basis of user benefits alone and so cite indirect (nonuser) benefits as additional justification. These include: 1) increased land values and a larger property tax base; 2) expansion of the downtown business area at a higher density of

development; 3) encouragement of greater residential densities (often considered more efficient for the provision of urban infrastructure and public services); and 4) alleviation of air pollution, noise and other nuisances associated with the automobile. Generally, though, the empirical evidence about these "nonuser impacts" is limited, as noted above.

At the regional level, some impact studies have been conducted for the Toronto and Montreal systems, as well as few earlier analyses. ^{1/} Probably the main reason for lack of such studies is the limited amount of transit construction over the past three decades. And in some situations, such as Chicago, the construction of extensions or replacements for existing lines made their evaluation difficult. At any rate, the revival of transit construction in this country has awakened as well an interest in their impacts, as attested by studies undertaken for Philadelphia's Lindenwold Line, ^{2/} and underway for San Francisco BART system. ^{3/} Recent policy statements by federal officials as to the desirability of joint development and value capture have reinforced this interest at the local level.

Local Area Level

Over somewhat smaller areas (than the region as a whole) some useful surveys of rising real estate values and new investment have been conducted by area banks or financial institutions. Often such studies suggest substantial benefits for

1/ For classic examples see E. H. Spengler, Land Values in New York in Relation to Transit Facilities (Columbia University Press: 1930) and J. L. Davis, The Elevated System and the Growth of Northern Chicago (Northwestern University: 1905).

2/ See David E. Boyce, Bruce Allen, Richard R. Mudge, Paul B. Slater, and Andrew M. Isserman, Impact of Rapid Transit on Suburban Residential Property Values and Land Development (Phase One Report to the U.S. Department of Transportation: November, 1972).

3/ See Impact of the Bay Area Rapid Transit System on the San Francisco Metropolitan Region (Highway Research Board Special Report III: 1970).

immediately affected areas; ^{1/} but they generally do not identify transfers from elsewhere in the region, or isolate the effects of mass transit improvements apart from other exogenous factors (e.g. growth in population and employment) in the metropolitan area.

Impact Area Level

A third type of transit impact study, currently the largest category, concerns the impacts of transit systems in those areas immediately served. Many socio-economic components of an EIS (environmental impact statement) for transit improvements also fall into this classification. In most instances the area of analysis extends no further than one-half mile from station stops in any direction. Some such studies are commissioned in advance of construction by transit authorities themselves as a means of determining station spacing and location, as well as land investment opportunities on adjacent properties. Frequently, the scope of locally funded studies is limited, and seldom do they include an after-the-fact analysis following implementation of the transit improvement. Increasingly, however, the federal government is beginning to sponsor "before-and-after" case studies on the development impacts occurring at specific station sites.

These studies document that important changes can occur in the adjacent land use. Rises in accessibility appear largely responsible for these impacts, among which are the following: high levels of land speculation, net changes in property values and conversion to other land use, and strong pressures for high density development and multiple activity centers. Whether these changes are coordinated is a function of public policy. Such case studies have been carried out suggest poorly planned transit station areas can also contribute to severe automobile

^{1/} In San Francisco, for example, construction of new buildings within five minutes of BART stations is estimated to have already exceeded \$1 billion, according to the Bank of America's Senior Economist. He also estimates that total commercial and residential construction in the three-district counties will easily exceed by several times the total of \$1.4 billion cost of the system. However, he does not estimate the volume of construction in the same three-county area absent the new transit system. See, Bay Area Rapid Transit District "BART Memo to Realtors," (Processed: February 1972), p. 1.

congestion, and heterogenous and often incompatible land use mix and generally undesirable urban environment.

Conversion, in fact, need not necessarily occur without the catalyst of public policy. A detailed analysis of the recently constructed Lindenwold Line has documented the fact that minimal land conversion took place around the Haddonfield Station after implementation of the new system. One of the factors was public concern that the basically single-family-dwelling atmosphere of the community be preserved, thus discouraging such large-scale zoning modifications as higher density developemnt would require.^{1/} This, of course, can reflect a major conflict between area-wide benefits for the region Lindenwold serves and the local objectives of communities along the line. In any event, the Lindenwold example shows the large-scale conversion and coordinated development do not occur automatically, particularly in the absence of supportive public policy.

The Literature to Date

The literature on transit impacts (particularly over smaller areas than the region as a whole) is substantial in size, but somewhat inconclusive in content. A 1975 computer-assisted search of this literature -- probably the most extensive, current canvass -- noted some 500 entries, not including numerous state and local government studies and consultant reports.^{2/} Similarly, other recent surveys of the transit-impact-on-land-use literature have respectively reviewed several hundred documents. A comprehensive critique of this substantial literature on transit-impacts-on-land-use was neither within the scope of this assignment nor apparently necessary in view of such extensive, recent efforts to survey and annotate documents in this field, notably through a number of federally-sponsored studies. For the interested reader, however, the most important general references to this literature are set forth in the feature box, pages following.

- 1/ See, Development Research Associates, An Evaluation of the Economic Impact of the Existing Lindenwold Line (1972). The presence of other factors (e.g. lack of latent demand or developable sites near the Haddonfield Stations) points out not all constraints to large-scale conversion arise in the public sector.
- 2/ See Highway Research Information Service reference, cited in the feature box at the end of this Appendix.

KEY TRANSIT-LAND USE LITERATURE

Administration and Management Research Association and the Office of Midtown Planning and Development, Office of the Mayor, City of New York, Introduction and Summary Findings. New York, 1976. Part of a joint development publication used in the framework of their own report. This study also contains a bibliography on the impact of transportation improvements on land values.

Deleuw, Cather. "Land Use Impacts of Recent Major Rapid Transit Improvements", Draft Final Report prepared for U.S. Department of Transportation Office of the Secretary, 1977. One section of an ongoing research project, which reviews some 300 documents. Subject headings include: Comprehensive Overview, Studies of Land Use Impacts, Ongoing Planning for Systems, Coordinated Planning Methods, Theory and Background, Other Policy-Related Materials, Value Capture, Highway-Related Impact Studies and Bibliography.

Highway Research Information Service, National Research Council, National Academy of Sciences - National Academy of Engineering. The Interrelationship Between Urban Land Use and Public Transportation. (prepared in the Urban Mass Transportation Administration, U.S. Department of Transportation. Washington, D.C. September, 1975. An in-depth exhaustive computer assisted literature containing approximately 500 entries. Annotations vary in length from one to two sentences to one page of single spaced text. Subject headings include certain development, mass transit, BART, rapid rail, zoning and land use.

Northern Virginia Planning District Commission, Research and Statistics Division. Annotated Bibliography: Transportation Evaluation Methodology and Case Studies with Special Emphasis on Social, Economic and Environmental Impacts of Rail Rapid Transit; Phase III C: Metro Station Impact Study. October 1975. Approximately 120 sources are annotated and cross-referenced by subject including: rapid transit impact, highway impact, economic analysis, cost/benefit analysis, land use theory, transportation land use models and value structure. About 90 additional references are listed in bibliographic form by city.

Onibokum, A. Depoju. Socio-Economic Impact of Highways and Commuter Rail Systems on Land Use and Activity Patterns: An Annotated Bibliography. Edited by Mrs. Mary Vance. Council of Planning Libraries Exchange Bibliography 815, 1975.

Skidmore, Owings and Merrill. Assessment of Community Planning for Mass Transit Volume 12: Bibliography. PB-253 642. Prepared for Office of Technology Assessment. Springfield, Virginia: National Technical Information Service, 1976.

Urban Systems Research and Engineering, Inc. The Growth Shapers: The Land Use Impacts of Infrastructure Investments and Secondary Impacts of Transportation and Wastewater Investments: Review and Bibliography. (prepared for the Council on Environmental Quality) Washington, D.C. 1975. The first publication stresses the need for understanding the link between infrastructure and land use. Facilities covered include water and wastewater systems, power supplies, highway and secondary road systems, mass transit and airports. The second covers selected states and provides an annotated bibliography.

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DOT-I-79-20



Executive Summary

Context and Conclusions

Joint Development

Value Capture

Land Use Regulation

Taxes, Assessments and Charges

Public Land Acquisition

Appendices

HOW TO USE THIS INDEX

Place left thumb on the outer edge of this page. To locate the desired entry, fold back the remaining page edges and align the index edge mark with the appropriate page edge mark.